INCLUSIVE EDUCATION FOR LEARNERS WITH DOWN SYNDROME: THE ROLE OF THE EDUCATIONAL PSYCHOLOGIST

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DISSERTATION

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"How we perceive the world depends on the beliefs we hold:
We see what we expect to see.
We hear what we expect to hear.
We can do what we believe we can do.
We allow ourselves to have what we believe we deserve.
If the truth is one thing and we see only the parts that we expect to see, our reality about that truth is subjective.
Because the energy of the Universe automatically gives each of us what we expect and believe we deserve, we each create our own subjective reality."

(Cooper,1991:63)

Declaration

I, the undersigned, hereby declare that the work contained in this dissertation is my own original work and that I have not previously in its entirety or in part submitted it at any university for a degree.

Signature:

Date:

OPSOMMING

Hierdie studie bestudeer die rol wat die opvoedkundige sielkundige kan speel in die ondersteuning van leerders met Downsindroom tydens die insluiting tot hoofstroomonderwys. Die studie vind plaas in 'n tydperk waar postmoderne denke en demokratisering van onderwys in Suid-Afrika te voorskyn kom. Hierdie tipe studie is relevant aangesien huidige beleidsdokumente klem lê op die demokratisering van onderwys en die transformasie na inklusiewe onderwys. Die Universiteit van Pretoria het in samewerking met die Universiteit van Stellenbosch 'n lootsprojek geinisieer waarin inklusiewe onderwys bestudeer is. Die projek het bestaan uit 'n gevallestudie van tien leerders met Downsindroom wat gedurende 1996 in verskillende hoofstroom kleuterskole geplaas is, waartydens hulle 'n leergereedheidsprogram gevolg het. Gedurende 1997 is die leerders in graad een-klasse in die hoofstroom geplaas. Die leerders se agtergrond was divers ten aansien van hul onderrig, maar die meeste van hulle was eers in spesiale skole. Die doel van die studie was om die leerders, ouers en onderwysers te ondersteun en verdere ondersteuning in a trans-dissiplinêre span te koördineer. Die waarneming en temas wat in hierdie studie na vore gekom het, beklemtoon dat diagnose, evaluasie en terapeutiese ondersteuning binne 'n ekosistemiese raamwerk belangrik is vir leerders met Downsindroom wat in die hoofstroom geplaas word. Die konsep van holistiese gesondheidsontwikkeling word beklemtoon in die transformasie van onderwys in Suid-Afrika. Opvoedkundige sielkundiges moet hulself dus ook strategies posisioneer. Gedurende die studie is die volgende rolle vir die opvoedkundige sielkundige geïdentifiseer: psigoterapeut, assessor/evalueerder, fasiliteerder, navorser/reflektiewe praktisyn, vakspesialis, konsultant, bestuurder en administratiewe rol en laastens die rol van ontwikkelingsfasiliteerder. Dit is ook belangrik dat die opvoedkundige sielkundige die rol as fasiliteerder van geestesgesondheid vertolk.

This dissertation is dedicated to

The Ten Learners with Down syndrome

Who made this study possible:

Angelique, Bernard, Carise, Cindy, Gerhard, Hannes, Janie,

Luan, Nicole, Werner

Thank you for all I have learnt from you!

And

Myrna Newmark

My mother, who, as an educator has touched the lives of many children and also to thank her for dedicating her life to my children and me.

Soli Deo Gloria

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CHAPTER ONE
INTRODUCTION AND CONTEXTUALISATION

1. INTRODUCTION

My study investigates the role that an educational psychologist might play in facilitating the inclusion of learners with Down syndrome into mainstream education. The context of my research is a period characterised by emerging postmodern discourses and the democratisation of education in South Africa. This type of inquiry has become relevant with the tendency of current policy debates to emphasise the democratisation of education and the movement towards inclusive education. Higgs (1997:100) as well as Sayed and Carrim (1997:91) make this point. This implies that learners with special educational needs, previously excluded from mainstream education, now have the opportunity to be included.

During December 1995, I was invited to play the role of supporting psychologist in a research project on learners with Down syndrome. The University of Pretoria in collaboration with the University of Stellenbosch launched a pilot project in which inclusive education was studied. The project consisted of a case study of ten learners with Down syndrome who were placed in various mainstream education pre-schools during 1996. During this year the learners followed a reception year programme and during 1997 they were placed in grade one mainstream classes. The learners came from diverse backgrounds with regard to their education, but mostly within a special school setting. The purpose of the project was to support the parents, educators and learners and to co-ordinate further support within a trans-disciplinary team.

Deacon and Parker (1996:48) write that in view of the goals envisioned by the National Programme of Action for Children in South Africa, the educational psychologist should play a significant role and it is therefore essential to launch pilot

projects timeously to identify problem areas and provide the necessary support systems. This project is an attempt to meet this need. In this chapter I describe the research project in which I was involved for this study. I also present the socio-historical context of the study, clarify relevant concepts and introduce the following chapters.

1.2 STATEMENT OF THE PROBLEM

Mouton (2000:137) asserts that research problems are usually formulated to: "address 'real-life' problems" and conceptualising the research problem refers to the "process by which someone has identified a real-life problem and 'translated' it into a research problem". I find the "Three Worlds Framework" as formulated by Mouton (2000:137) useful to describe my research problem. The three worlds are presented from a "perspective of general knowledge production" and emphasise the different motives that "underlie knowledge production in each world":

- *World 1*: Everyday life and lay knowledge (the "ordinary social and physical reality that we live in...we live as ordinary human beings in multiple contexts" (Mouton, 2000:138).
- *World 2*: Science and scientific research ("Although it is, of course, not possible to produce scientific results that are infallible and 'absolutely' true for all times and contexts, we are motivated as scientists, to constantly strive for the most truthful and the most valid results" (Mouton, 2000:138).
- *World 3*: The world of meta-science where we "submit our research to critical reflection". The meta-disciplines such as philosophy and the methodology of science are located in world three as they "all involve reflection on the nature of science and scientific research" (Mouton, 2000:139).

I have adapted Mouton's (2000:140,141) framework for the purpose of my study as presented in Figure 1:The Research Problem. Mouton (2000:142) emphasises that this distinction between the three worlds is merely an analytical distinction as these worlds are interwoven. To elaborate on the theme of this study I contend that the

every-day life theme (World 1) is the role of the educational psychologist within the process of democratisation of education in South Africa. In a complex and diverse society such as South Africa with transformation towards inclusive education, the educational psychologist may need to justify his/her professional role in providing support to learners. The Salamanca Statement (UNESCO, 1994:31) presents the current character of international educational reform of support services by the following claim:

> Provision of support services is of paramount importance for the success of inclusive educational policies...External support by resource personnel from various agencies, departments and institutions, such as advisory teachers, educational psychologists, speech and occupational therapists etc., should be co-ordinated at the local level....Indeed experience suggests that education services would benefit significantly if greater efforts were made to ensure optimal use of all available expertise and resources.....

Within the above setting, I formulate the central research question of my study as:

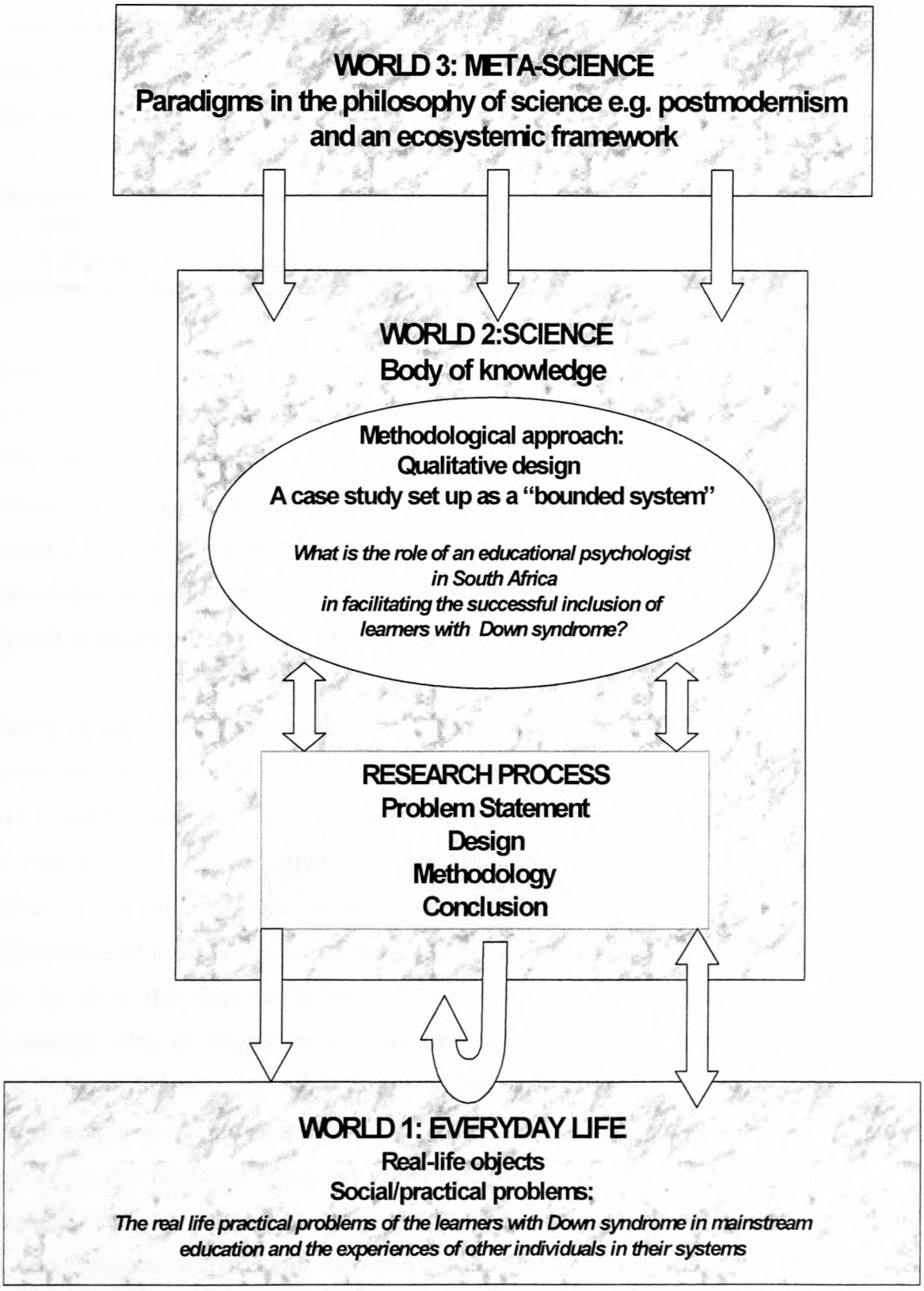
What is the role of an educational psychologist in South Africa in facilitating the successful inclusion of learners with Down syndrome in mainstream education?

The following sub-subordinate questions are also identified for this study:

- What does inclusion entail and how should the process be implemented in South Africa?
- What is the role of the educational psychologist in the context of the development of the learner with Down syndrome?
- What role can the educational psychologist play during the process of including the learner with Down syndrome into mainstream education. What are the implications for the future role of the educational psychologist in South Africa?

FIGURE 1: THE RESEARCH PROBLEM

The research problem is presented in the context of the relationship between philosophical paradigms, methodological approaches and the real world (Adapted from Mouton, 2000:140,141)



For the purpose of this research project a specific group was studied and a relatively unknown field was explored. It is hoped my inquiry may lead to the improvement of practice, especially in the development, and influence of support systems for learners with Down syndrome. Lastly there will be an attempt to contribute to the training of the educational psychologist as reflective practitioner and professional in South Africa (Van der Merwe, 1996:295,304; Swart, 1994).

1.3 HISTORICAL OVERVIEW OF EDUCATIONAL TRANSFORMATION IN SOUTH AFRICA

Engelbrecht (1997:1) makes the point that although the concept of inclusion has been adopted by international movements, it has been relatively unknown in South Africa until fairly recently. She, however, points out that current policies on inclusion call for an investigation of its practical implications. The period in which I conducted my study was marked by the development of several such policies on education and their acceptance by the post-apartheid government. By way of elaboration, I present a brief overview of educational transformation in South Africa.

The history of specialised education in South Africa generally follows a trend similar to the international movements. Specialised education in South Africa was initiated by religious organisations and was characterised by extreme disparities in services for various races. During the colonial era from 1652 the first schools were established and close to the end of the nineteenth century the first schools for learners with disabilities were started. Free education was provided for Whites, but not for African learners. In 1937 the Special Schools Amendment Act prescribed that all learners with disabilities were to attend the special schools (often far from home) forcing young learners to leave home at an early age. In 1948 a Special Schools Act was passed including medical and mental diagnosis in special education. The apartheid era was ushered in by the National Party on coming to power in 1948, and the Population Registration Act was passed in 1950 defining four racial groups: Whites, Indians, Blacks and Coloureds. This was followed by the Bantu Education Act (1953). Each group was educated separately, with the attendant duplication of functions,

responsibilities and services. Specialised schools for white learners were expanded. A special law was enacted – the Mentally Retarded Children's Training Act (1974) – which provided only for those learners who were regarded as educable. The government made no provision for African learners. Free and compulsory education was not provided either. Some special schools for African learners were established by missionary organisations. Discrepancies and problems were frequently documented and by the end of the apartheid era one found fragmented specialised education, duplication of services and facilities, separate Department of Educations, separate schools for different categories, lack of coordination, limited support, a shortage of professionals, disparities in the provision of funds, unequal access to schools, varying admission criteria, varying terminology, a medical focus, racial discrimination in the provision of specialised education, discrimination between urban and rural areas, and a lack of trained teachers and equipment. Early childhood development also suffered neglect in South Africa and this is a critical shortcoming in the light of the importance of early identification of learner needs and consequent intervention. Lack of support and response to diversity on the levels of further education and training was also evident and learners who experienced barriers in learning seldom had opportunities for further education at tertiary level. Socio-economic factors handicapped many learners and facilities for support remained limited (Du Toit, 1996:8–12; Department of Education, 1997:25–29,32,40).

The Department of Education (1997a:x) notes the following:

> Historically the areas of special needs education, or specialised education, and education support services provision have reflected the general inequalities of South African society, with disadvantaged learners (the majority of learners) receiving inadequate or no provision. Specialised education and support has predominantly been provided for a small percentage of learners with disabilities within 'special' schools and classes. Most learners with disability have either fallen outside of the system or been 'main streamed by default'. The curriculum and education system as a whole has generally failed to respond to the diverse needs of the learner population, resulting in massive numbers of dropouts, push-outs and failures.

In a situational analysis Eloff (1997: 6) argues that the historically complex structure of 18 separate Departments of Education in South Africa could not meet the needs of a school-age population, at least 40 per cent of whom needed specialised educational support. Eloff (1997) adds that support should no longer focus only on the learner

(intrinsic disability), but on the system and structure (extrinsic factors). Curriculum development and educational support structures in current South Africa should be transformed to ensure a flexible education structure, which accommodates diversity. It is in this respect that the role of the educational specialist is regarded as essential in the process of transformation (Archer *et al*, 1994; Donald, 1996; Van den Berg & Naicker, 1996:24).

Three trends are observed in the historical development of educational support (Department of Education, 1997:27):

- Support services operated on racial lines revealing vast inequalities.
- Intelligence tests (the development and administration) contributed to the institutionalisation of learners with special needs, as categorisation, labelling and placement were done on the grounds of these test results.
- From 1948 the medical model was followed for diagnosis and treatment of special needs and this adherence undermined the status of learners with special needs.

Previously, education support services were drawn from staff in departments such as health and social welfare. They included psychologists, social workers and support, guidance and counselling educators, speech and occupational therapists, doctors, nurses and other specialists. The existence of the inequalities has been mentioned and support services remain largely unavailable outside formal education, for instance, the lack of facilities for street children (Department of Education,1997:41).

Prompted by the above scenario, Burden (1996:5) believes that to meet local requirements there should be transformation towards an inclusive educational system with a focus on knowledge obtained from the South African community. Schools must accept learners in spite of physical, intellectual, social, emotional, language or other needs. All learners are seen as having unique or special needs and have the right to be included in a global educational system.

A child-centered pedagogy, focused on potential, not impairments, must be developed to educate all children. It assumes that human differences are normal and

that learning must accordingly be adapted to the needs of children rather than fitted to pre-ordained assumptions regarding the pace and nature of the learning process. A child-centerd pedagogy is beneficial to all students and, as a consequence, to society as a whole, becoming people oriented (not product), respecting both the differences and the dignity (values) of all human beings (Burden, 1996:6).

Based on the following international declarations, pressure for creating an effective culture of learning for a diverse society has increased since the eighties: Standard Rules on the Equalization of Opportunities for People with Disabilities (1993), Universal Declaration of Human Rights (1948), the World Declaration of Education for All (1990) and Standard Rules on the Equalization of Opportunities for Persons with Disabilities (Department of Education, 1997:59). This trend is observed in current South African policy documents and Professor Kader Asmal, the Minister of Education notes that:

> In April 1994, centuries of struggle against colonial and apartheid rule culminated in a peaceful transition to democracy. Fear was replaced with hope, repression by democratic freedom, exclusion and division by the possibilities of inclusiveness and unity.... As a nation, we took a conscious decision to understand the emerging form and function of globalization, and locate our country as a competitive economy within this context (Department of Education, 2001a:i).

Professor Kader Asmal (Department of Education, 2001a:i) further states that "post-apartheid education reconstruction has been a central part of the country's reconstruction and development project" and that the government is driven to "overcome the devastation of apartheid" and to "provide a system of education that builds democracy, human dignity, equality and social justice." The programmes of policy in the past seven years are marked by key shifts and during the first phase of reform, general discriminatory practices were targeted. The second phase reflected deepened systemic reform through the five-year Tirisano[1] programme and the third phase is focused on creating "greater equity and quality of learning conditions, and improving standards and learning outcomes" (Department of Education, 2001a:ii).

[1] Minister Asmal's Call to Action in July 1999 which was " operationalised in January 2000 in the plan known as Tirisano- a Sotho word meaning 'working together'...Tirisano identifies nine strategy priorities as the basic building blocks to enable the development of a fully functioning education and training system" This implies the call for a massive social mobilization motivated by a shared vision (Department of Education, 2001b).

One of the goals for transformation since 1994 includes creating a policy framework which gives "concrete expression to the values that underpinned the post-apartheid state" (Department of Education, 2001a:3). The SA Constitution (1996), The National Education Policy Act (NEPA) (1996), The South African School Act (SASA) (1996), The White Paper on Education and Training(1995), The Further Education and Training Act (1998) and The Higher Education Act (1997) are viewed as key policies and legislation during the first phase of transformation. The following discussion briefly indicates other policy announcements, which have implications for the process of transformation towards a more inclusive educational system.

1.3.1 THE CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA

The Constitution (1996) provided the framework for a unitary system of education, managed by the national Department of Education and nine provincial departments (Department of Education, 2001a:3).

Basic human rights are written into the Constitution (1996) and education, as well as access to equal education, are viewed as basic rights. The Constitution forbids discrimination and all learners; including learners experiencing barriers have fundamental rights to dignity, equality and action. Learners are also entitled to be educated in an official language of choice.

1.3.2 THE WHITE PAPER ON EDUCATION AND TRAINING

The White Paper provides a comprehensive framework for the transformation process, which is necessary to change the education system into one that will meet the needs of all learners. It also clearly integrates the notions of education and training and argues that both are key to human resource development in a country and essential to the development of skills to sustain effective economic development (Department of Education, 1997:53).

Key areas of concern in the White Paper (1995) are that all learners have access to lifelong learning, historical inequalities in South Africa need to be recognised and

redressed, the principle of equity should direct the provision of all state resources and quality education should be provided (Department of Education, 1997:53).

1.3.3 THE SOUTH AFRICAN SCHOOLS ACT

The South African Schools Act (1996) ushered in a new era for general education and the principles of the Constitution and those set down in White Papers are reflected in this Act. Nevertheless gaps are observed which may become restrictions for learners facing barriers to learning. The Act provides for equal access to basic education by creating a single inclusive education system; there is provision for support services, with acknowledgement of parental rights, elimination of compulsory exclusion of learners and the recognition of sign language. The term 'special educational needs' remains questionable as historical definitions of 'special need' are still adhered to. There may be limitations on certain rights in terms of Section 5(1) in the Act (Department of Education, 1997:55). Sections 4(1) and 12(4) are also viewed as problematic. There are concerns on how exclusion could be in the best interest of a learner and the clause "'where reasonably practicable' undermines the mandatory power of the Act" (Department of Education, 1997:55). More prescriptive systems need to be adapted to ensure that the rights of all learners are met (Department of Education, 1997:55).

1.3.4 OTHER GOVERNMENT POLICY INITIATIVES AND IMPORTANT DOCUMENTS

The following policy documents and opinion pieces also played a role in educational reform from 1993 to 1997:

- Towards a New Primary Curriculum in South Africa (Mac Donald, 1993:5); Strategy for Early Childhood Development: ECD (Department of Education and Sport Recreation) (Hendricks, 1995:1);

- Curriculum Framework for General and Further Education and Training (Consultative Forum on Curriculum: National Department of Education) December 1995 (Department of Education, 1995:18);
- The Organisation, Governance and Funding of Schools: A draft policy document for discussion (Draft Education White Paper 2,1995);
- The Organisation, Governance and Funding of Schools (Department of Education, 1996a:37);
- National Programme of Action for Children in South Africa: Working Document, May 1996;
- Comments of the Education Task Team of the South African Federal Council on Disability on the South African Schools Bill, September 1996;
- Green Paper on Higher Education Transformation, December 1996, Department of Education, Pretoria;
- Social Welfare Development (Family Environment, Out-of-Home Care and Social Security) (Department of Education, 1996:51);
- Campaign on the Culture of Learning, Teaching and Service (COLTS) (Department of Education, 1997:59);

1.3.5 CURRICULUM 2005, THE NATIONAL QUALIFICATIONS FRAMEWORK AND OUTCOMES- BASED EDUCATION

> The National Qualifications Framework is a framework for providing lifelong learning opportunities utilising nationally recognised levels. (Department of Education, 1996:15).

During October 1995 a ministerial task team was appointed and a discussion document on the development of a national qualifications framework was prepared. In March 1997 this document ('Lifelong Learning through a National Qualifications Framework') motivated the appointment of the South African Qualifications Authority (SAQA) with the role of developing a national qualifications framework (NQF). The next step was for SAQA to develop the critical cross-field outcomes, which would ensue from the chosen field of learning (called areas of learning in the context of school learning) in which skills, attitudes and knowledge would be developed. Following this, the specific outcomes for each learning area were formulated, which in turn gave rise to the formulation of assessment criteria, range statements and

performance indicators. The development of learning programmes would be the responsibility of curriculum developers at provincial, regional and local levels and would reflect the requirements of the South African Qualifications Authority. Quality assurance bodies would be appointed to ensure that learning programmes were of equal standard at various institutions of learning. The National Standards Bodies (NSBs), the Standard Generating Bodies (SGBs) and the Education and Training Quality Assurance Bodies (ETQAs) are involved in the implementation of the National Qualifications Framework (Malan, 1997: 18–22; Education Information Center, 1996:6–34).

It was anticipated that this framework would facilitate the integration of education and training by means of a single hierarchy on which "all learning standards, levels and qualifications will be registered for national recognition (portability and progression) purposes" (Department of Education, 1995: 4). A learning programme would consist of courses, modules or units of learning through which learners could achieve learning outcomes spelt out in unit standards (Department of Education, 1996:17).

Learning outcomes can be achieved at different rates, and this process is responsive to the needs of learners with special educational needs as their achievement is recognized, and equal opportunities are provided for the educational needs of adults and young learners inside and outside regular education. The implications of this framework have received urgent attention from educators and specialists (Department of Education, 1996: 13,15,30).

> The Department of Education has the following vision for an educated South Africa: A prosperous, truly united, democratic and internationally competitive country with literate, creative and critical citizens leading productive, self-fulfilled lives in a country free of violence, discrimination and prejudice (Department of Education, 1997:Preface).

The National Qualifications Framework includes the General Education and Training Band, which is made up of formal schools offering the Foundation phase (including pre-school, early childhood development and grades 1 to 3), the Intermediate phase (grades 4 to 6) and the Senior phase (grades 7 to 9), which forms the last phase of the General Education and Training Certificate and includes national assessment. The Further Education and Training Band follows at levels 2 to 4, and this is a non-

compulsory band. This level serves as preparation for higher education, vocational education, careers as well as self-employment. Adult basic education and training is accommodated at three levels below the General Education Certificate. The Higher Education and Training Band follows the Further Education and Training Certificate at levels 5 to 8, which includes the highest levels of tertiary training such as doctorates and further research degrees (Department of Education, 1997: 3–9).

Curriculum 2005 constituted the new curriculum framework for learning at school level out of which outcomes-based education was developed and launched during April 1997 by the National Department of Education (Department Education, 1997b:60). This framework attempted to implement a curriculum that is responsive to diversity as curriculum outcomes are broadly defined. Furthermore it provided the space for all learners to proceed at their own pace, to be respected for their uniqueness, and for learners to demonstrate their success in diverse ways (Department of Education, 1997b). The implementation of Curriculum 2005 began in 1998 in Grade 1.

Outcomes-based education and training constitutes the new approach South Africa has adopted within Curriculum 2005. SAQA adopted eight learning areas and selected seven critical outcomes for Curriculum 2005 (Department of Education, 1997c:8). This approach facilitates access to education for all learners at all levels of education and equips learners with essential skills required for life and economic development (Department of Education, 1997:60):

> An outcomes-based approach to education and training provides a framework for learning and teaching, which can respond effectively to a diverse range of learner needs. Each learner's needs will be accommodated through multiple teaching and learning strategies and assessment tools. Learning is characterised by its appropriateness for each learner's needs, interests and developmental levels. Each learner is provided with time and assistance to realise their own potential and work at their own learning pace. Through these strategies, learners work to become more responsible for their own learning. They should be able to make appropriate learning decisions and be independent in their learning and thinking (Department of Education, 1997:60).

In February 2000 the Ministry commissioned a review of Curriculum 2005, which was completed in May 2000 and "the history of Curriculum 2005 in many ways reflects the history of educational change more generally over the last five years" (Department of Education, 2001b:18). The draft Revised National Curriculum Statement for Grades

R-9 was developed as a requirement by the Council of Education Ministers and the cabinet and was published in July 2001 (Department of Education, 2001). This statement includes a definition of the "kind of learner required by our society" and is seen to strengthen and consolidate Curriculum 2005 (Department of Education, 2001:1,3).

1.3.6 THE NORMS AND STANDARDS FOR TEACHER EDUCATION, TRAINING AND DEVELOPMENT

The discussion document on the new Norms and Standards for Teacher Education, Training and Development (Department of Education, 1997b) sets the stage for reform in the training of educators. The circulation of this document has given interested parties the opportunity to comment on its recommendations. The technical committee formulated various roles for which educators need to be trained (Department of Education, 1997b:89):

- The role of facilitator/ teacher
- The role of learning material developer
- The role of assessor
- The role of evaluator
- The role of analyst/diagnostician
- The role of learner supporter
- The role of teacher supporter
- The role of manager of learning systems
- The role of the role of administrator

As these roles are prescribed for the training of educators, they could have relevance for the role of the educational psychologist and I therefore considered these roles during my study. At the time that my research report was finalised the 'Criteria for recognition and evaluation of qualifications for employment in education based on the norms and standards for educators' had been published (Department of Education, 2000).

1.3.7 THE REPORT OF THE NATIONAL COMMISSION ON SPECIAL NEEDS IN EDUCATION AND TRAINING (NCSNET) AND THE NATIONAL COMMITTEE FOR EDUCATION SUPPORT SERVICES (NCESS) (DEPARTMENT OF EDUCATION, 1997) AND THE EDUCATION WHITE PAPER 6 (DEPARTMENT OF EDUCATION, 2001)

> The National Commission on Special Needs in Education and Training (NCSNET) and National Committee for Education Support Services (NCESS) were appointed by the Minister and Department of Education to investigate and make recommendations on all aspects of 'special needs and support services' in education and training in South Africa (Department of Education, 1997:x*).*

The recommendations of the NSCSNET and NCESS attempt to identify barriers and needs as well as provide "guidelines for transformation" to create access to quality education for all learners such as will eventually promote full participation in society (Department of Education, 1997: xi).

> The principles guiding the broad strategies to achieve this vision include: acceptance of principles and values contained in the Constitution and the White Papers on Education and Training; human rights and social justice for all learners; participation and social integration; equal access to a single, inclusive education system; access to the curriculum; equity and redress; community responsiveness; and cost-effectiveness (Department of Education: 1997:xi).

The organisation and governance of the education system play an important role in the process of learning and teaching and at present the management of this system operates at four levels: 'central or national level, regional or provincial level, district level, and local or center-of-learning level' and current support services mainly exist at national and provincial levels. Structures for support at district and center-of-learning level are limited (Department of Education, 1997:39).

Comments made in this report on the past and current situation have been included in the historical overview. Inadequate and fragmented human resource development contributes to inadequate training of educators, support personnel and parents. Educators especially are not trained to respond to diverse needs at all levels of the general education system, and training provided at various sectors is inconsistent, although there have been positive attempts at coordination in recent years. The effect of inadequate training is the demoralisation of learners and educators. Yet teacher training accounts for the "largest single sector of higher education in the country". Few

educators with disabilities are included as teachers in training institutions. A tremendous shortage of trained psychologists is noted and the attention of psychologists in the past was concentrated on the primary school. Rural areas received little support in this domain. Training of psychologists was based on a medical model mainly as a result of requirements of the South African Medical and Dental Council and the Department of Education at the time. Some universities have instituted reform in their training for preventative action and systems intervention as well as community psychology. The contributions of parents, youth and childcare workers, house parents, teacher aides, sign language interpreters and education management personnel as well as other community resources need to be developed (Department of Education, 1997a: 42–49).

Barriers to learning and development need to be overcome in the process of educational reform. The development of a policy and legislative framework for accommodating diversity forms the foundation of reform and a clear commitment to this end has been made by new legislation and policies for education, and South Africa has come in line with international trends (Department of Education, 1997:51).

This NCSNET and NCESS report informed my research to a great extent and is therefore integrated throughout my research report. Extracts of the documents are often quoted . During the final process of data analysis of my research the Education White Paper 6 (as a result of the NCSNET and NCESS) report was launched (Department of Education, 2001a). The Department of Education (2001a:9) supports an inclusive education and training system and clearly states the following:

> The results of decades of segregation and systematic under-resourcing are apparent in the imbalance between special schools that catered exclusively for white disabled learners and those that catered exclusively for black disabled learners. It is, therefore, imperative that the continuing inequities in the special schools sector are eradicated and that the process through which the learner, educator and professional support services populations become representative of the South African population, is accelerated.

The White Paper (Department of Education, 2001:28–30) notes the following about strengthening education support services. Strengthening support services is first seen as the key to reducing barriers to learning and consequently district-based support teams need to be appointed with the primary function of evaluation

programmes and making recommendations. Further, the capacity of educational centers needs to be expanded to include a diversity of learning needs. General, further and higher educational institutions are required to "establish institutional-level support teams" to support learners and educators. These teams would offer the full range of education support services. The importance of education managers is acknowledged in the process of removing barriers to learning. To build capacity in this regard pre-service and in-service education and training and professional support would be provided. Special schools would be transformed into resource centers and would contribute the provision of specialised professional support. The Department of Education (2001a:28) further states that:

> In revision and aligning our education support service, we will focus our efforts on establishing a co-ordinated education support service along a continuum from national through to provincial departments of education, through to schools, colleges, adult and early childhood learning centers, and higher education, which is sensitive to and accommodates diversity, with appropriate capacities, policies and support services.

1.4 CONTEXTUALISATION OF EDUCATIONAL PSYCHOLOGY

1.4.1 DESCRIPTION OF EDUCATIONAL PSYCHOLOGY

The concept of psychology implies the scientific study of both human and animal behaviour. Psychology has been accepted as a science on the grounds of its empirical methodology and systematic nature. The systematic nature of psychology is manifest in its orderly, consistent and meaningful classification and economical summary of the body of knowledge. The faculties of education of universities offer educational psychology and the training includes the core competencies of general psychology with a specialised focus on the learner, families, communities and educational issues. The body of knowledge of educational psychology has an important role to play in the development of all South African learners as their prosperity will depend on how well they are prepared for life in totality (Mwamwenda, 1995:3,4,7; Zanden & Pace, 1984:6; Psychology Society of South Africa, 1997).

Changes in education, such as we have experienced in South Africa should also imply changes in educational psychology. New ideologies about education and placement of learners with special needs will challenge professionals in the field and redefine their roles. Change, will however, come only if the practitioners and university faculties change. The systemic complexities facing the profession of psychology need to be addressed in a scientific way in order to support communities. This also implies an understanding of converging forces at various levels of the ecosystem, which implies that psychologists need to focus on the broader community and not only on the individual (Conoley & Gutkin, 1995:213; Zigler & Hall, 1995:301).

If education-support professionals can address the complex challenges facing them within the South African context, they have an important role to play in increasing and supporting the participation of all learners in a quality education system embodying the ideal of service to society (Engelbrecht, 2001:19).

De Jong and Van der Hoorn (1993:228) notes that the debate of "issues of systemic versus individualistic and preventative versus curative approaches were examined" by the National Education Policy Investigation (NEPI) initiative. The argument that professionalism should be abolished within a democratic system is also raised in this dialogue. The authors do however argue that "depowering oneself by denying or minimizing one's professional expertise, or allowing oneself to be depowered in a system where there is clearly an immense need for expertise and skills is unethical" (De Jong & Van der Hoorn, 1993:229). De Jong and Van der Hoorn (1993:229) emphasize the responsibility of the educational psychologist towards the community due "to their dual role both as psychologists and educationalists. They stand uniquely poised at the interface of the national crises (mental health and education) and this position provides them with the potential for potent and wide-ranging impact" (De Jong & Van der Hoorn, 1993:229). The issue of democracy is contended to be relevant to the role of the educational psychologist as ideologies are viewed to have "implications for political and social living" and a democratic constitution does not guarantee democratic practices. The authors further argue, "the process of creating a democratic society should be embedded in the development of democratic values and attitudes" (De Jong & Van der Hoorn: 1993:230). Engelbrecht (2001:19) supports

the notion of systems thinking and emphasises that the "challenges and opportunities facing education support" is informed by the insight in "the continuous, dynamic interaction between the multiple systems within which support takes place". This necessitates that educational support by professionals should reflect "holistic health-promotive, developmental and preventative action in relation to individuals, schools and communities, ensuring that issues are not fragmented and individualised but dealt with within collaborative frameworks" (Engelbrecht, 2001:21). De Jong (2000:356) further emphasises that the "concept of health promotion has international legitimacy and has been placed firmly on the education reform agenda in South Africa".

In summary De Jong and Van der Hoorn (1993:229) cautiously promote the professional status of the educational psychologist in the following way:

> Educational psychology as a profession has the potential to co-create contextual differences that make a noticeable difference, but may well instead become caught in a paradox; the paradox of engaging in continual rescue operations, which are system maintaining whilst aiming to engage in empowering processes, which promote transformative growth.

1.4.2 GENERAL CHALLENGES AND TRENDS IN CURRENT SOUTH AFRICAN PSYCHOLOGICAL PRACTICE

Stones (1996:224) describes inconsistencies among "various constituencies regarding conceptions of mental illness, mental health-care providers and services offered". His findings point to ignorance of the complexities of mental illness in the community and amongst general practitioners. It is claimed that there is an urgent need for local empirical research in the process of transformation of South African psychology. A balance between international professional standards and indigenous needs is essential if the relevance of educational psychology in the new democratic South Africa is not to be questioned. Educational psychology in South Africa developed from the pioneering research in Europe and the United States of America. There is, however, an urgent need to redefine the role of the educational psychologist in the context of an effective national educational system. Many uncertainties pose questions as yet unanswered on the essential value and viability of educational

psychology at various levels of the ecosystem. Looking at the present realities of the South African scene, some observers say that psychology has become an *"elitist"* service of which a small, advantaged sector of South Africa is able to make use and hence it plays only a minor role in current mental health services. Little attention is given to preventative and educational intervention. The social role of psychologists is poorly defined and traditional intervention strategies and assessments are questioned. It is contended that the psychologist should fill the role of mental health facilitator and act as a consultant instead of acting exclusively therapeutically (Deacon & Parker, 1996:166; Conoley & Gutkin, 1995:211; Barnard and Paulsen, 1997:3; Van der Ryst, 1995:3–18; Professional Board for Psychology & Psychological Society of South Africa, 1998:6).

The Professional Board for Psychology and the Psychological Society of South Africa (1998:6) note that the roles and responsibilities attached to the profession of psychology, the nature of statutory control, the training model, and the assurance of professional competence are the key elements to be considered for revision in South African psychological practice. According to the Professional Board for Psychology and the Psychological Society of South Africa (1998:6), they also note that the following topics and trends therefore need to be addressed:

- the urgent demand for psychological services,
- organisations requesting professional recognition,
- the many untapped training resources,
- the increased formalisation and standardisation of psychological tests,
- the need to ensure contextual relevancy of psychological approaches,
- the fragmentation of the profession because of licensing categories,
- the emergence of redefined training and educational reform,
- the entry of new players such as technikons,
- the rigid present academic system,
- changes in educational policy and the knowledge explosion,
- the poor understanding in society of the profession of psychology.

The following factors may handicap and counter the efforts of psychologists[2]: the poverty of the community, vast distances, professional and social isolation, limited access to support services, low job satisfaction, multiple duties and responsibilities, ethical dilemmas, few leisure activities, dealing with at-risk populations, suspicious community attitudes, community ignorance about disabilities, decreased political power and a lack of supervision and support. Poverty, racism and violence also have long-term effects which may manifest themselves in psychological disturbances or problems in a system in which professional help is limited, as most learners do not have access to mental health services. Integration and contextualisation of educational psychology, taking account of the realities and challenges in South Africa, is an important imperative in the validation of this discipline. Current training programmes vary vastly between institutions: some institutions attempt to match the current professional requirements with the needs of the South African population, but there are training programmes which show the absence of an effective and responsible training model and many students are only trained for private practices (Engelbrecht, 1997b:1–4; Van der Ryst, 1995:108–121; Merrell, Pratt, Forbush, Jentzsch, Nelson, Odell & Smith, 1994:28; Veldsman, 1996:1,2).

Barnard and Paulsen (1997:5) argue that, as a science, educational psychology is firmly grounded in the fields of education and psychology. The authors are of the opinion that educational psychology could play a relevant and dynamic role together with other support services to improve the quality of life and mental health of the South African society. This contribution by educational psychologists can only be meaningful, however, if they themselves are prepared to change and adapt.

In relation to this Conoley and Gutkin (1995:215–216) state that effective transformation would:

> ...reveal school psychologists who (a) function as scientist-practitioners, (b) understand the psychology of organizations and social systems, (c) conceptualize their job role in terms of building improved service delivery models rather than just meeting the needs of individual students, (d) find ways to cope with the clinical press of their job sites while staying focused on a proactive agenda for organizational

[2] In this study the concepts "psychologist" and "educational psychologist" are used interchangeably with the notion that where the concept "psychologist" is used "educational psychologist" is also implied

change, and (e) expend significant energy in building a base of credibility and influence with powerful adults in their system.

1.5 THEORETICAL FRAMEWORK OF THE STUDY

Freedman and Combs (1996:18–40) argue that the researcher's view of the world should influence his/her choice of research design. In the following discussion I touch on the literature that influenced my research design as it relates to my worldview.

Higgs (1997:105), Deacon and Parker (1996:167) as well as Söhnge and Arjun (1996:90,91) note that educational philosophy needs to take up postmodern challenges since postmodern theories create possibilities for educational reform in South Africa. As Söhnge and Arjun (1996:93) cogently put it:

> Postmodernism calls for a shift in focus to emancipation and empowerment issues in education. This implies that postmodernists encourage students to recognise, create, and channel their own power, in this way the necessary life skills are also attained.

Brief accounts of postmodernism by authors such as Bamisaiye (1995:10), Deacon and Parker (1996:167), Hollinger (1994:113), Kvale (1992:12,14,28) and Söhnge (1995:32) bring the following issues to the fore:

- The twentieth century postmodern society realises it is free to make and remake itself "without resorting to universal truths from some external authoritative source" and there is a willingness to confront the freedom and chaos of the world and to use it towards the good of humanity.
- The postmodern identity is described as a "borderline self" or "relative self", with multiple dimensions, continuously under (re) construction, abandoning the Newtonian model with its measurement, clinics and asylums.
- Social forces and structure and patterns of culture contribute to the individual's development and the focus is moved to the outside of the human world leading to an "externalization of the person in a postmodern discourse"

- Postmodernism is also associated with an open system where energy and matter are exchanged. It is therefore open for the changes in natural situations and these fluctuations create a process of rejuvenation and a movement toward socially useful knowledge. Postmodern consciousness aspires to bring psychologists and society closer together, encouraging the psychologist to bring new options to the culture.

I find Kvale's (1992:15,71) view on postmodernism particularly useful:

> In postmodern everyday life, as well as in postmodern science, one occupies a multiplicity of standpoints each within at least a local community; and within such communities there are standards, ways of judging, to which one must conform if one is to be accounted a member...there are no universally accepted systems of knowledge to which to appeal. So, although we can find reasons for preferring some ways of life to others, no single way of life is obviously best and that is, perhaps, just as well!

Educational psychology in South Africa has to respond to these postmodern challenges. It therefore becomes important that the future role of the educational psychologist is responsive to many realities currently facing education in South Africa. In a complex and diverse society such as South Africa, which is moving to a more inclusive society as well as education system, the educational psychologists may have continuously to (re) examine their professional role in providing support to learners.

The literature distinguishes two postmodern perspectives, deconstructive postmodernism and constructive postmodernism (see Slattery, 1995:15, Le Grange, 1999:305). The first perspective (eliminative or deconstructive postmodernism) rejects the notion of worldviews (grand narratives) as it deconstructs notions of truth, knowledge and language (Slattery, 1995:15). Constructive postmodernism does not reject the notion of worldviews and holds that worldviews should be continually revised (deconstructed and reconstructed) as humans are faced with the challenges of a changing world (Le Grange, 1999:305). According to Le Grange (1999:305) "constructive postmodern thought provides support for the ecology, peace, feminist, and other emancipatory movements of our time, while emphasising that the inclusive emancipation must be from modernity itself". The latter perspective of postmodernism informs my study. The ecosystemic framework, which informs my work, is a worldview that has emerged from deconstruction and reconstruction of the views such as the

Newtonian worldview and the earlier systems worldviews (first order cybernetics), and so on.

The motivation for my choice of an ecosystemic framework is influenced by various researchers' (De Jong, 1996; Donald, 1996; Kriegler, 1989, 1996) who argue for a systems perspective for educational psychologists. De Jong (1996) for example suggests that a school systems' consultancy service could provide support to all in an effort to "strive on chaos" (to create some kind of order) during the process of educational reform. It is further proposed that we need to move away from a simplistic notion of disability towards a systems approach in which relevant systems and subsystems are viewed as being in interaction. When observing a learner with special needs, one is obliged to study the complexity of his/her world and be conscious of the heterogeneity and complexity of individuals. Variables such as age, gender, behaviour, level of intellectual ability and many other variables, which interact with each other, should be considered. Although behaviour is associated with goal seeking, social systems are seen as complex and one needs to assume non-linear relationships among many of the variables (Levine & Fitzgerald, 1992:154; Zigler & Hall, 1995:298–300).

This could be likened to a spider's web, where events in one part of the web have an influence on other parts. A major disruption of the harmony may threaten the whole system and dissonance is created. The system attempts to maintain equilibrium or a state of dynamic balance (Donald *et al*, 1997:35). An ecosystemic approach emphasises the interaction of many of factors both within the family and beyond the relational bonds of the family. The concept "ecosystem" was coined by Auerswald (1968) who described the balanced interaction of family, and other social systems, creating an interdependent relational ecology. Authentic ecosystemic interventions are described as inherently biopsychosocial. Challenges develop due to the interaction of factors inside and outside the family and meaningful solutions may be co-constructed in the dialogue that occurs among the participants which indicates the collaborative quality of an ecosystem approach where the psychologist is a partner with the family and other social resources. The psychologist facilitates a movement forward by increasing the diversity of perspectives on the problem and then focusing

the network's energy on solutions. The psychologist, family and network co-evolve a new system. Changes occur because the entire ecosystem has moved together in a new direction. Common elements in ecosystemic interventions are sensitivity to familial and extra-familial factors in the development of problems and the utilization of larger systems resources in the assessment and treatment process (Seaburn, Landau-Stanton & Horwitz, 1995:11).

In the context of the above discussion I see it as important to explore the concept of 'cybernetics'. Cybernetics indicates the 'science of communication and control in animal and machine' and was coined from the Greek word meaning 'steersman' by Norbert Wiener (Principia Cybernetica Web, 2000:1). The anthropologist Gregory Bateson (Principia Cybernetica Web, 2000) noted that cybernetics focused on form and patterns, a way of looking at things and a language for expressing what one saw. Theories in cybernetics tend to rest on four basic pillars, which are variety, circularity, process and observation. Observation, including decision-making, is the process underlying cybernetic theories of information processing. Within the field of cybernetics an epistemology of systems involving their observers (second-order cybernetics) is developing, which is qualitatively unlike the earlier interest in the ontology of systems, which are observed from the outside (first-order cybernetics). There is therefore a movement away form the Newtonian epistemology, which rests on the assumptions of reductionism or atomism, linear causality, and neutral objectivity, towards a worldview that is characterized by words like 'holistic' and 'ecological'. A second-order cybernetics perspective indicates that in the case of living systems it is impossible for an observer to be objective and to perceive objectively. The assumption is made that what we see is at least partially constructed by us. When two or more observers agree on their observations, they have co-constructed a particular reality for themselves. Constructivism is then viewed as central to a second-order perspective in psychotherapy and the reality which is co-constructed in a system has to fit with the ideas which the participants have of themselves, each other, the problem and the world in general. The co-constructed reality exists in the domain of shared meanings, a 'domain of consensus'. For this reason, a second-order perspective is called an ecosystem approach where the term then combines the focus on system and on ecology and emphasises the complicated, interlinked and ever-

changing networks of ideas and meanings within and between systems. In the movement away from a Newtonian perspective in the social sciences, general system theory could be seen as a stepping-stone. While it broke away from reductionism, it still implied an outside, objective observer and linear causality through its emphasis on interaction and power. Through Einstein's Special Theory of Relativity all principle concepts of the Newtonian worldview were shattered. It was shown that there was no universal flow of time, although much of our daily lives run on Newtonian mechanisms and we experience our bodies in a mechanical way. Yet two observers would order events differently in time if they moved with different velocities relative to the observed events. Through the rejection of objectivity and the emphasis on the autonomy of systems, an ecosystemic approach constitutes another step away form a Newtonian epistemology (Brennan, 1998:23; Fourie, 1998:11-17; Principia Cybernetica Web, 2000:1,2).

Brennan (1988:19,20) further conceives of the perspective and trends in the above discussions in the following manner:

> As we allow ourselves to develop new sensitivities, we begin to see the whole world quite differently. We begin to pay more attention to aspects of experience that might have seemed peripheral before. We find ourselves using new language to communicate our new experiences...Our world of solid concrete objects is surrounded by and permeated with a fluid world of radiating energy, constantly moving, constantly changing like the sea... As this knowledge has developed, and Newtonian physics has given way to relativity, electromagnetic and particle theories, we are more and more able to see the connections between scientific objective descriptions of our world and the world of subjective human experience.

The 'objectivity' of the modernist worldview may ignore the perceptions of individuals and treat people as passive, powerless objects within the research relationship. From a postmodern approach it is believed that there are limitations in the ability of the researcher to measure and describe the universe absolutely and universally. The postmodernist researcher is more concerned with personal meanings people give to experiences than focusing on disinterested facts. It is also assumed that there are no essential truths. Beliefs associated with this worldview include that realities are socially constructed, constituted through language and organized through narrative.

This framework also acknowledges that a particular system cannot be fully known

beyond a certain level of complexity. In the attempt to develop a working model a segment of the "ecosystem universe", in this case the learner with Down syndrome is selected for observation. I acknowledge that the model used for this study is not all encompassing, but that it merely constitutes an attempt to identify the aspects of the learner with the ecosystem of the syndrome, which is most relevant to this study. The learner with Down syndrome is viewed as functioning within the domains of a physical body, as a child engaged in behaviour with his/her world, in interpersonal relationships and engaged representationally through his or her internal working models (IWM). The basic unit of this ecosystem model is the individual learner with Down syndrome. The model emerges from the individual learner's functioning in dyadic relationships within the family relationship, peer and other social relationships. Other systems associated with the learner's life are also embraced (O'Connor & Ammen, 1997:8; Seaburn, Landau-Stanton & Horwitz in Anderson, 1995:11).

O'Connor and Ammen (1997:17) note that from an ecosystemic framework the psychologist as researcher appreciates and embraces the value of diversity to the entire health of humankind much as 'ecologists have come to see the value of every organism to the overall health of the planet'. These authors further hold that:

> The purist phenomenological view states that although we may come to some consensus about what comprises external reality, we can never actually know whether that reality exists or even whether those with whom we have reached a consensus really view the world in the same way we do (O'Connor & Ammen, 1997:17).

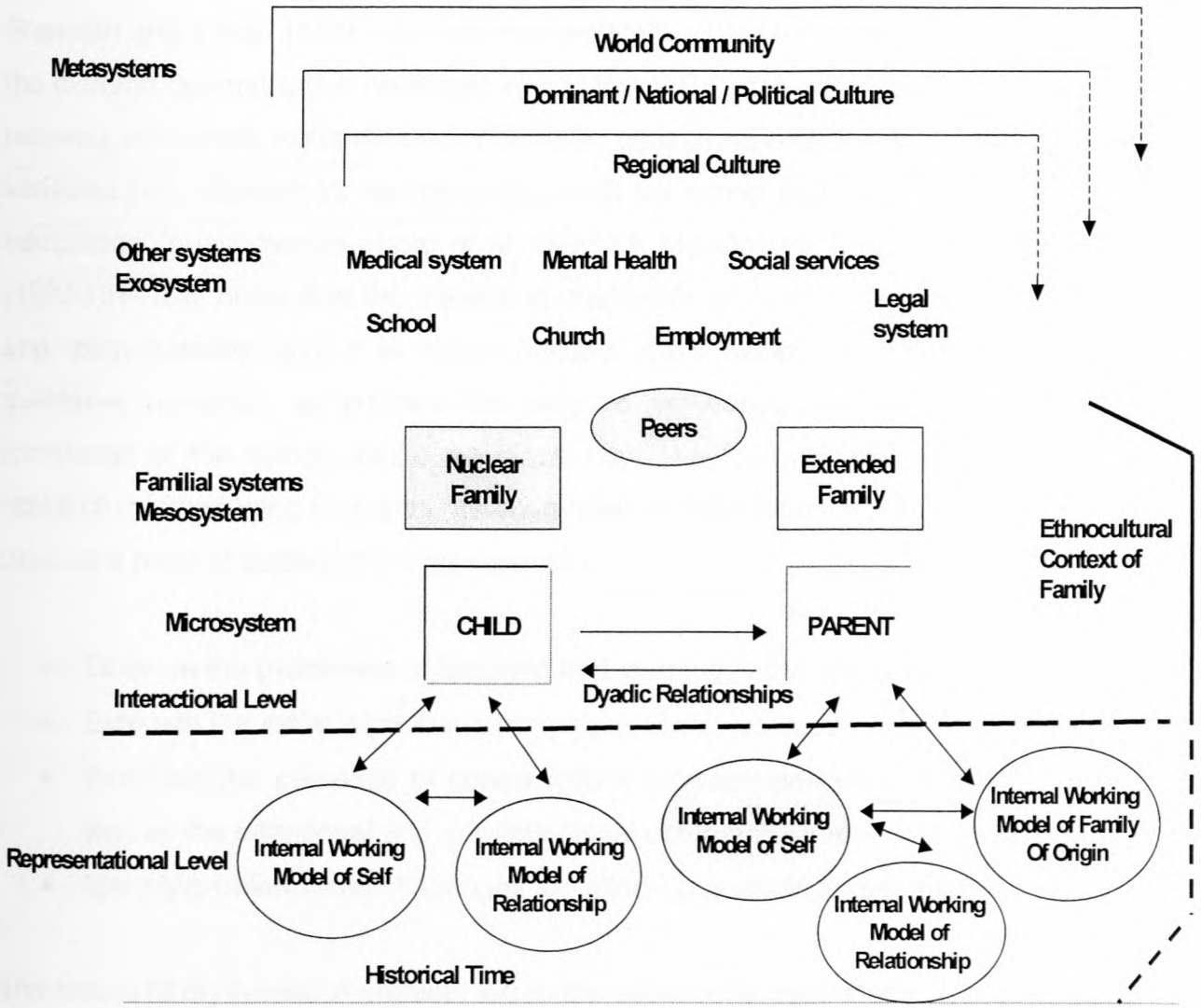
O'Connor and Ammen (1997:17–19) further suggest that it is essential for the psychologist to become competent or skilled in handling diversity in the process of supporting the learner toward getting his/her needs met without ignoring the overriding needs of the cultural group of which he/she is a member. This entails balancing the needs of the learner and those of the system in which he/she is embedded. This would mean that the psychologist demonstrates the skill to recognise culture and its impact on the learner and celebrates the individual learner's culture. Learners and their behaviour therefore exist within the context of multiple interacting systems, including physical, interpersonal, intrapsychic and metasystemic systems, which change over time. Ecosystem therapeutic support considers all of these

systems when conceptualizing the present problem and formulating a support programme.

O'Connor's (1991:vii) suggestion that the concept ecology indicates the "totality or pattern of relations between organisms and their environment which forces the psychologist to consider the multiple systems of which the child is a part from the point of intake until termination" is also integrated into my research.

A graphic description for the ecosystemic framework of my study is presented in Figure 2: An Ecosystemic Framework (Adapted from O'Connor & Ammen,1997:8).

FIGURE 2: AN ECOSYSTEMIC FRAMEWORK



(Adapted from O'Connor & Ammen,1997:8)

1.6 THE RESEARCH PROCESS

During my study all procedures and events were documented throughout to ensure a sound research progression. I adopted a qualitative, non-experimental approach. My understanding of qualitative research is based on Borg, Gall and Gall's (1993:194,195) description of qualitative research:

> The purpose of qualitative research is to develop an understanding of individuals and events in their natural state, taking into account the relevant context. Qualitative research is predicated on the assumption that each individual, each culture, and each setting is unique. Quantitative researchers make a different assumption, namely, that they can discover 'laws' that lead to reliable prediction and control of educational phenomena...such trends or laws are sufficiently strong to have practical value, even though they do not allow for perfect prediction or control.

Sherman and Webb (1988:56) note that qualitative research in education questions the extreme rationalization observed in education. Qualitative research is holistic and presents contextual explanations for complex cause-and-effect relations between the variables that influence human behaviour, with the aim of getting a hold on a specific educational 'phenomenon' (Borg *et al,* 1993:13; MacDonald, 1993:102). MacDonald (1993:101–105) notes that the interest in qualitative research is increasing nationally and internationally and it is recommended that developing countries focus on qualitative research, as policies can only be developed appropriately if there is knowledge of the culture inside the classroom. The following recommendations for research in developing countries, as suggested by MacDonald (1993:101–105), were used as a point of departure for my research:

- Observe the processes of teaching and learning in the classroom.
- Evaluate the initial implementation phase of new policies.
- Establish the presence of contradictions between policies and practice as well as the intentional and non-intentional outcomes of new innovations.
- Identify problems and challenges for follow-up qualitative research.

The nature of my research problem led to the choice of a case study. The case study constitutes a single case, which is the programme of supporting the inclusion of

learners with Down syndrome into mainstream schooling. Adelman, Jenkins and Kemmis (1996:3) note that "Case study research always involves 'the study of an instance in action'" which, in this case, was the process of including the ten learners into mainstream education. Adelman *et al* (1996:3) further assert that "case study methodology is eclectic" and techniques and procedures could include observation, interviews, audio-visual recording as well as field note taking. This case study was set up in a "bounded system" as described by Adelman *et al* (1996:3) in which "issues are indicated, discovered or studied so that a tolerably full understanding of the case is possible." It consisted of ten learners with Down syndrome (five girls and five boys) who were studied over a period of 24 months and data were produced at different points in time to register changes. The ecosystemic framework and the programme of the research project provides the boundaries of this study. Adelman *et al* (1996:3) explains that:

> The most straightforward examples are those in which the boundaries have common sense obviousness, e.g. an individual teacher, a single school, or perhaps an innovatory programme.

The qualitative researcher is usually the primary agent for data production and analysis. Qualitative research often involves fieldwork as well as an inductive approach. I attempted to work towards building a theory from observations and understanding gained in the field. This finally led to a descriptive outcome. During the research my position changed from outsider to participatory involvement, which includes the inter-subjectivity of a person on the inside. My research was open to change of focus if the emerging data required it. Consistently with the requirements of qualitative research, good rapport with the participants of my research was established, permission was gained from important stakeholders in the community and access to the field was planned in the least-disruptive manner (Merriam, 1998:6–8,38; Mertens,1998:160, 175-180; Van der Merwe, 1996:291,292).

I conducted an extensive literature review for this study, because to my mind literature describes the state of scholarship and the latest ideas on key concepts. A literature review is also important in planning the study as it provides a context, background and empirical basis for the study and problem formulation. It also provides an analysis of the possible needs of the learner with Down syndrome within

inclusive education and the role the educational psychologist could play towards supporting learners with special educational needs (Mertens, 1998:33–55; Sherman & Webb, 1988:181; Tuckman, 1994:14). I considered the following criteria as described by Tuckman (1994:40) during the analysis of relevant literature: Is the research of this theme workable and am I interested in it? Will it improve the field? Is it publishable and does it have practical value?

The following discussion includes a clarification of concepts, which are important for this study.

1.7 CLARIFICATION OF CONCEPTS

The following concepts are important for this study and need clarification:

1.7.1 THE LEARNER WITH SPECIAL EDUCATIONAL NEEDS

Du Toit (1996:14) describes the term learners with special education needs as:

> a broad term to refer to all learners in need of additional educational support. This includes learners whose special educational needs arise from intrinsic factors, such as disabilities, as well as extrinsic (social, structural and systemic) factors. However, it is realized that a large proportion of children with special educational needs experience a reciprocal interaction between intrinsic and extrinsic factors.

First I believe that, because of the ecosystemic framework of the study, the likely role the educational psychologist could play in the lifespan development of the learner with Down syndrome needs to be placed within the context of the learner with special educational needs.

Donald *et al* (1997:15) argue that special needs indicate a context where learners require specific support for coping with contextual, social, and individual disadvantages and/or challenges. Contextual disadvantages could include oppression, denial of access to resources and privileges resulting from the social context in which people find themselves. Although internal and external factors

contributing to special needs are distinguished conceptually, most individual cases include a mixture of 'internal' and 'external' factors. These factors have to be viewed within the context of ecosystemic interaction. A continuum of special need within an ecosystemic perspective as adopted from Donald *et al* (1997:71) is presented in Figure 3.

Donald *et al* (1997:66) further state that various factors affect the developmental and educational processes at different levels of the system as seen in Figure 4. For the purpose of this study the concept 'disability' will generally refer to conditions, which have some clear physically identifiable basis. These include conditions like physical, sensory, and neurological disabilities, as well as moderate to severe intellectual disabilities. According to Donald *et al* (1997:73,148,235) the interaction with social context has much to do with how these disabilities and difficulties are caused and maintained, and answers on how best to address the special needs of these learners may therefore vary in different contexts. Certain behaviors or values are more prized in some communities than others, and all learners with the same disability do not necessarily have the same special needs. The reality of developmental risk must be observed together with the phenomena that some learners show resilience and withstand severe contextual stresses due to protective factors such as their personal characteristics, characteristics of the learner's family or characteristics of formal and informal social support networks. Within the context of the above, certain issues concerning the special needs of learners are viewed as relevant to this study. First children's mental health problems and needs seem to be receiving greater attention nowadays. There is an improved ability to distinguish the various disorders, which previously gave rise to poorly understood or undetected problems. Second, the number of learners receiving support services is nevertheless still limited and learners often face combinations of environmental stressors and psychosocial deprivations. Within the present system of specialized education in South Africa there is evidence of segregation, the social isolation of many learners, separation of learners from parents and mainstreaming by default without adequate support or access to basic services. Socio-economic factors such as violence, abuse, the AIDS epidemic, negative attitudes towards diversity and inadequate assessment of need, could also place learners at risk. To make provision for basic services, individual needs must

first be identified. Abnormal child psychology and developmental psychopathology are two approaches describing and studying disorders of childhood and adolescence in a manner recognizing the importance of developmental processes and tasks, but there is a lack of consensus in the categorization and definitions of special needs. Elements common to all the definitions are neurological dysfunction (often related to atypical brain function), uneven growth patterns (uneven development of various components of mental ability or 'developmental imbalances'), difficulty in academic and learning tasks, discrepancies between achievement and potential and the exclusion of other causes. (Department of Education, 1997:25; Donald *et al,* 1997:247; Lerner, 1985:9; The American Psychiatric Association, 1994:80; Mann, Suiter and McClung, 1992:10,17 and Mash and Wolfe, 1999:3).

1.7.2 THE LEARNER WITH DOWN SYNDROME

A detailed discussion of the learner with Down syndrome is presented in Chapter Three. This discussion merely serves the purpose of introduction and contextualisation.

Esquirol (1838) provided the first description of Down syndrome. John Langdon Down (1866) however was the first to describe some of the characteristics of Down syndrome and the syndrome was named after him. This syndrome occurs in approximately one out of every 600 live births in the world due to an abnormality of chromosome 21. The learner with Down syndrome has 47 instead of 46 chromosomes (Cicchetti & Beeghly, 1990:ix; Louw, 1992:275).

> ...the presence of an additional copy of this small chromosome exerts a profound impact on the developmental biology and psychology of Down syndrome (Cicchetti & Beeghly, 1990:ix).

Down syndrome remains the most frequently investigated and controversial phenomenon in the field of intellectual disability. The cause is still obscure although the greater age of the mother is one of the most frequently given causes. Three types of chromosomal aberrations are recognised in cases of Down syndrome (Kaplan & Sadock, 1981:859; Kaplan, Sadock & Grebb, 1994:1027):

- **Trisomy 21** (an extra chromosome 21 present, instead of two) which characterizes the majority of people with Down syndrome, raising the chromosome presence to 47;
- Nondisjunction after fertilization (therefore not inherited) in any cell division causes **mosaicism** (both normal and trisomic cells are found in various tissues) which constitutes the second type of chromosomal aberration;
- **Translocation** indicates the fusion of two chromosomes, most often chromosomes 21 and 15, the result a count of 46 chromosomes (despite the extra chromosome 21). This disorder is usually inherited.

The overriding feature of Down syndrome is intellectual disability (Kaplan, Sadock & Grebb, 1994:1027). The majority of learners with Down syndrome belong to the moderate to severely disabled groups, although mental development appears to progress normally from birth to six months of age, after which a gradual decline in mental ability is observed. People with Down syndrome are described as placid, cheerful and cooperative, but during adolescence this easy disposition changes and emotional and behavioural difficulties are recorded. Other important signs in a newborn include hypotonia (decreased muscle tone), small stature, hyper-flexibility of joints, oblique palperbral fissues, abundant neck skin, a small-flattened skull, high cheekbones and protruding tongue. The hands are broad and thick, with a single palmar transversal crease, and the little fingers are short and curved inward (Kaplan & Sadock, 1981:859; Kaplan, Sadock & Grebb, 1994:1027; Louw, 1992:275; Hallahan & Kauffman, 1994:125).

Low resistance to infection is often observed in learners with Down syndrome, as well as a greater incidence of congenital heart defects, visual impairments, upper respiratory infections and leukaemia. Deterioration of language, memory and self-care skills are often observed after the age of 30 years, and over the age of 40, senile plaques and neurofibrillary tangles (similar to Alzheimer's disease) occur (Kaplan & Sadock, 1981:859; Kaplan, Sadock & Grebb, 1994:1027; Hallahan & Kauffman, 1994:126). Thirty to 40 years ago only 50 per cent of all infants with Down syndrome survived, but now many reach the ages of 50 and 60 years. The study of learners with Down syndrome increases the understanding of the condition, eliminates stereotypes

and ultimately these advances inform us about appropriate methods of support. Recent educational and psychological research has also increased other expectations for learners with Down syndrome, which necessitates a 'life-span developmental perspective in planning medical, educational, and psychological support for children with Down syndrome and their families' (Cicchetti & Beeghly, 1990:x).

Research on the cognitive development of learners with Down syndrome also indicates that educational strategies currently used are inadequate, as they are not based on sound empirical data on the way learners with Down syndrome actually learn (Engelbrecht, 1994:38). International research (Casey, 1988; Buckley & Sacks, 1987; Shepperdson, 1988; Bird 1996:1) indicates that inclusive education for the learner with Down syndrome can be successful, but there is a need for more information on Down syndrome. This need to know more about the condition is even more critical in the South African educational system and various researchers have recently been motivated to initiate research on this phenomenon (Kachelhoffer, Engelbrecht, Le Roux & Newmark, 1996:3).

Cicchetti and Beeghly (1990:x) further emphasise the following benefits from the study of individuals with Down syndrome:

> Conversely, through the study of Down syndrome from a developmental perspective, advances can occur in the formulation of a truly integrative theory of human development.
> Such a study also highlights the respective roles of biological, perceptual-cognitive, linguistic, social, emotional, and representational factors in the developmental process. Furthermore, the study of Down syndrome permits us to identify alternative pathways or processes to adaptive and maladaptive outcomes...the developmentalist interested in this condition is in the unique and enviable position of examining the interaction between heredity and environment in the developing organism.

1.7.3 INCLUSION

The phenomenon of inclusion may be viewed as one of the most debated challenges in global education within twentieth century postmodern society, and a diversity of responses are evoked on the topic with a number of different definitions. In broad

terms, inclusion refers to all discrimination which would according to Lazarus, Daniels and Engelbrecht (1999:48) mean that:

> ... discrimination and exclusion relating to social class, race, gender, disability and other less obvious areas (such as learning styles and paces), should be understood and addressed in a holistic and comprehensive manner.

Dyson and Forlin (1999:38) assert that inclusion has developed out of both a reconstruction of notions of disability and an attempt to found social and educational policy on principles of social justice and human rights. Dyson (2001:11) further notes that there are various notions of inclusion and not one "commonly accepted notion". He outlines the following varieties of inclusion:

Variety of inclusion	**Target group**	**What it means to be 'included'**	**Vision of inclusive society**	**Implications for schools**
Inclusion – as placement	Disabled children/those with special educational needs	To have the right of 'membership' in regular school and classrooms	Rights-based	Schools must acknowledge rights and provide supports & adaptations to ensure access
Inclusion-as-education for all	Groups with little, no, or poor-quality education	To have access to school education	Welcoming, non-discriminatory	Schools must be capable of educating all learners
Inclusion-as-participation	All learners, especially those who are marginalized in schools	To face minimal barriers to learning & participation	Rights-based and cohesive	Schools must critically examine current practices to identify and remove barriers
Social inclusion	Groups at risk of social exclusion	To attain high levels in school in order to thrive in the labour market and help shape society	Combination of rights and obligations, with active citizens and a competitive economy	School must have strategies for raising the attainment of low-achieving groups

(Dyson , 2001:12)

Dyson (2001:2) describes the first variety of inclusion as "inclusion-as-placement" which has its base in the history of the "integration" movement. It may serve as a baseline and concerns itself with the location of education for learners with special

educational needs. The second variety, "inclusion-as-education-for-all" as promoted by UNESCO, focuses on inclusive education and defines inclusion as "enabling schools to serve all children" (UNESCO, 1994:iii). This variety suggests three kinds of arguments, which are: a social argument (creating a more inclusive society), an educational argument (inclusive schools are more effective) and a resourcing argument (inclusive schools are cost-effective) (Dyson, 2001:4). The third variety, "inclusion-as-participation" concerns itself with how fully learners participate in their educational settings (Dyson, 2001:7). The fourth variety, "social inclusion" defines "equality as *inclusion* and inequality as *exclusion*" and refers to inclusion as "inclusion in its broadest sense to citizenship" (Giddens, 1998:102–3). It "has something in common with the notions of pluralistic, rights-oriented and 'inclusive societies'" (Dyson, 2001:9).

Stainback and Stainback (1996:xi) state that all learners should therefore receive appropriate educational opportunities in the mainstream classroom and every learner is accepted and supported according to individual needs. This view is supported by Ferguson (1995:282), who also notes that the right to public education is the right of every learner. Smelter, Bradley, Rasch and Yudewitz (1994:35,36) argue that 'full inclusion' is accomplished if the educator in a mainstream school educates all learners together, regardless of their needs. Intense, never-ending debates are going on around the concept of 'full inclusion', as this concept only indicates 'some learners' to certain educators. Mawdsley (1995:27) states that the concept 'inclusion' is also a popular way of describing the support rendered to learners with special educational needs and could also imply decentralisation of power or the elimination of special education.

Engelbrecht (1999:5) further notes that debates around inclusion mostly focus on the practical issues and loose focus of the broader context of inclusion, but the broader context define the actual movements of inclusive education. Engelbrecht (1999:9) also asserts that the debate on inclusion presents itself as two discourses: on the one hand the implementation of inclusive education with the focus in inclusive schools as organisations and, secondly the discourse on "the notion of an inclusive democracy which celebrates diversity".

The movement towards a more inclusive educational system is characterised by phases, which are mainstreaming (selective integration of learners) and integration (more participation than mainstreaming), but the majority of instruction time was still in a separate setting and difference was still emphasised (Engelbrecht, 1999:8,9).

The concept 'inclusion' in this research report is used in the context of 'full inclusion' as noted by Murphy (1996:471):

> ...the total integration of all students who have special needs – particularly those with disabilities – into the age-appropriate, regular-education classrooms of their community schools, regardless of the nature or degree of the needs involved.

also accept the following point of departure for the purpose of my study:

> Inclusive classrooms start with a philosophy that all children can learn and belong in the mainstream of school and community life. Diversity is valued; it is believed that diversity strengthens the class and offers all of its members greater opportunities for learning (Stainback & Stainback, 1996:xi).

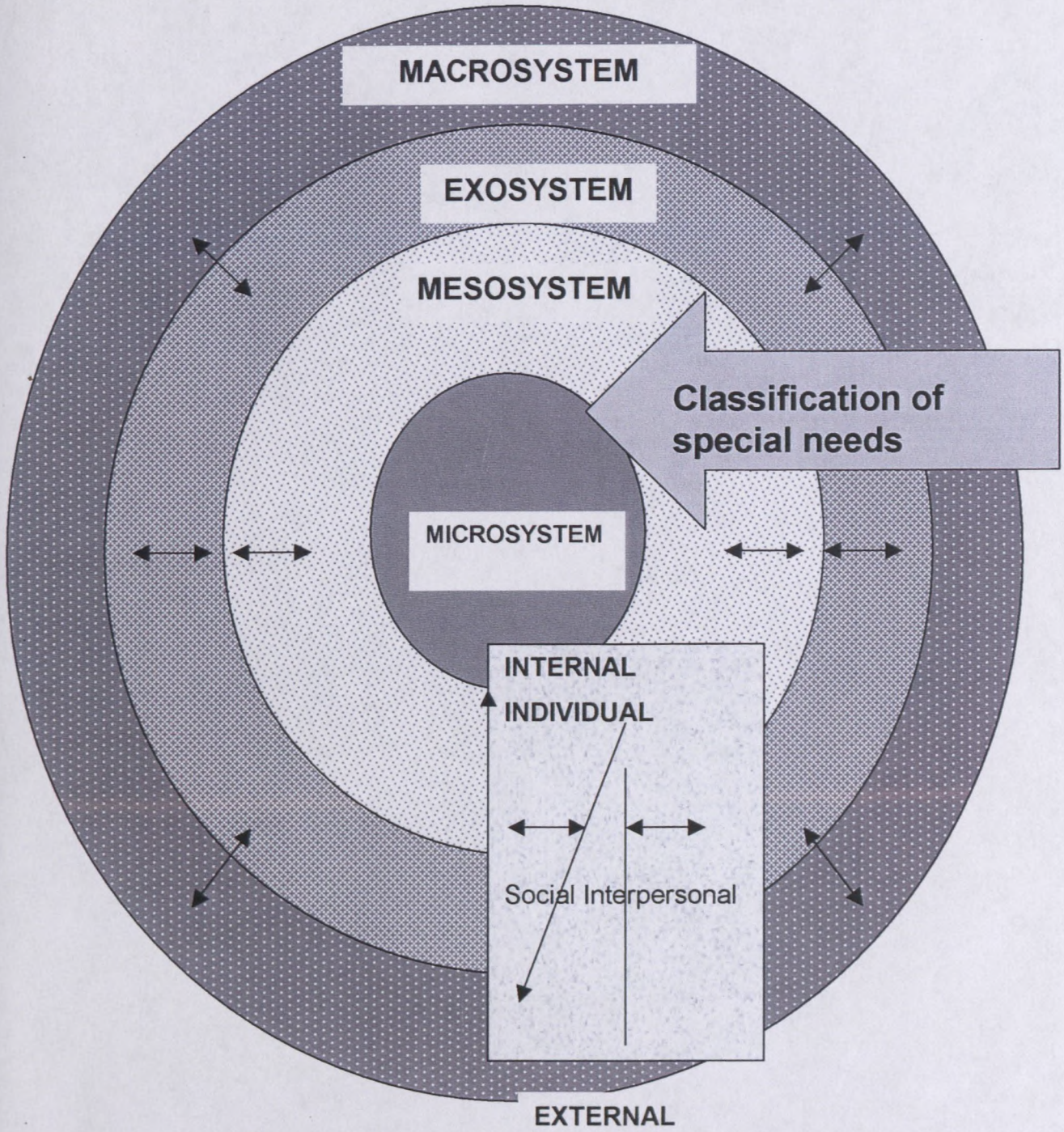
Engelbrecht (1999:3) argues that inclusion should be viewed from a meta-approach, which implies that "human experience and action occur in everyday life as part of the wider human, political and ethical effort of securing a better life". The ecosystemic framework from which my study was conducted is in line with this meta-approach, as adapted by Engelbrecht (1999:4) in the context of the following claim made by Jordaan and Jordaan (1989:63), that human functioning can be studied through the contextual analysis and synthesis of the various systems that constitute the meta-ecosystem. Dyson and Forlin (1999:3) relate to this by noting that inclusion is part of a broader network of "social and economic policies", especially in a country such as South Africa where there is "a rapid expansion of educational and economic opportunities". Dyson and Forlin (1999:3) do however caution that inclusion will have to be contextualised for individual "educational, social and economic contexts". One should also consider that the process of change continues and will not end at the issue of inclusion; inclusion could be a stepping-stone for effective processes.

1.8 SUMMARY OF THE DISSERTATION CHAPTERS

The research was consolidated as a status report (Charles, 1995:81; Wiersma, 1995). **Chapter One** includes an introduction to the research, the research problem, overviews of educational reform in South Africa, the role of the educational psychologist in South Africa and clarification of concepts. In **Chapter Two** the perspectives on inclusion in the South African context are described. The discussion includes issues such as new thinking in special needs education, action towards inclusive schools at national level and guidelines for action at the regional and international level. In **Chapter Three** the role of the educational psychologist in the context of providing support to learners with Down syndrome is discussed within an ecosystem framework. A detailed discussion of the research process is presented in **Chapter Four**. **Chapter Five** presents the field study and case studies in the context of the ecosystem with specific reference to the role of the educational psychologist during the research process. The impact of inclusion on the learner with Down syndrome in totality is discussed in the context of the foundation phase (reception year and grade one). In **Chapter Six** I discuss the findings and provide recommendations and possibilities for further investigation related to the study. In **Chapter Seven** I provide a brief summary of the study and also share some reflections.

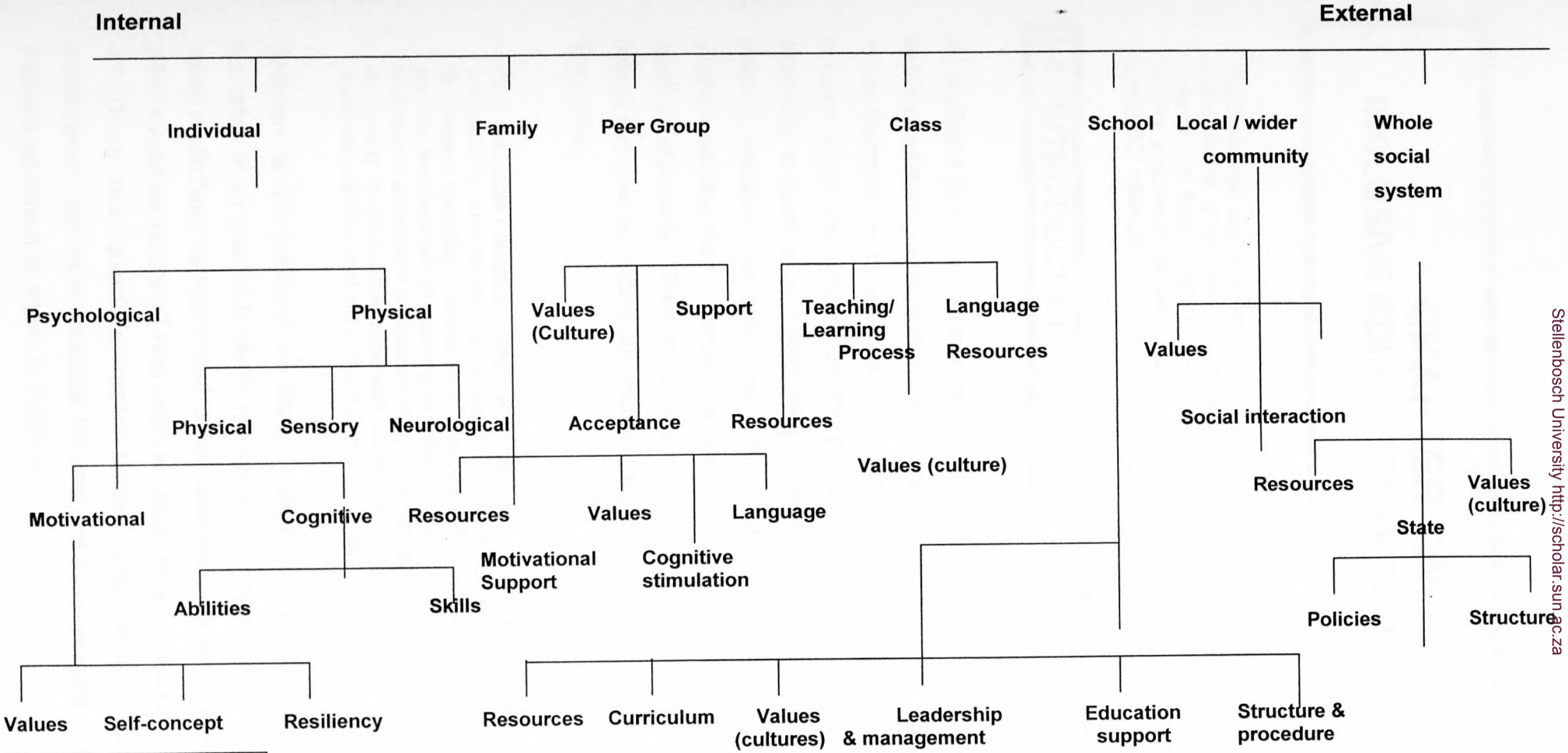
Chapter one has indicated the need for transformation in education and in the psychological profession of South Africa, including the move towards democracy and equality in the case of learners with special needs. The next step is to plot the way forward in the most effective way. The following chapter is an in-depth search on ways to realise the vision of inclusion.

FIGURE 3: THE CONTINUUM OF SPECIAL NEED



(Adapted from: Donald *et al*, 1997)

FIGURE 4: INTERNAL AND EXTERNAL FACTORS THAT AFFECT DEVELOPMENT



Donald et al 1997:66

CHAPTER TWO
INCLUSIVE EDUCATION IN SOUTH AFRICA

> The challenge now is to formulate requirements of a 'school for all'. All children and young people of the world [...] have the right to education. It is not our education systems that have a right to certain types of children. It is the school system of a country that must be adjusted to meet the needs of all children. LINDQVIST (UNESCO, 1994:28).

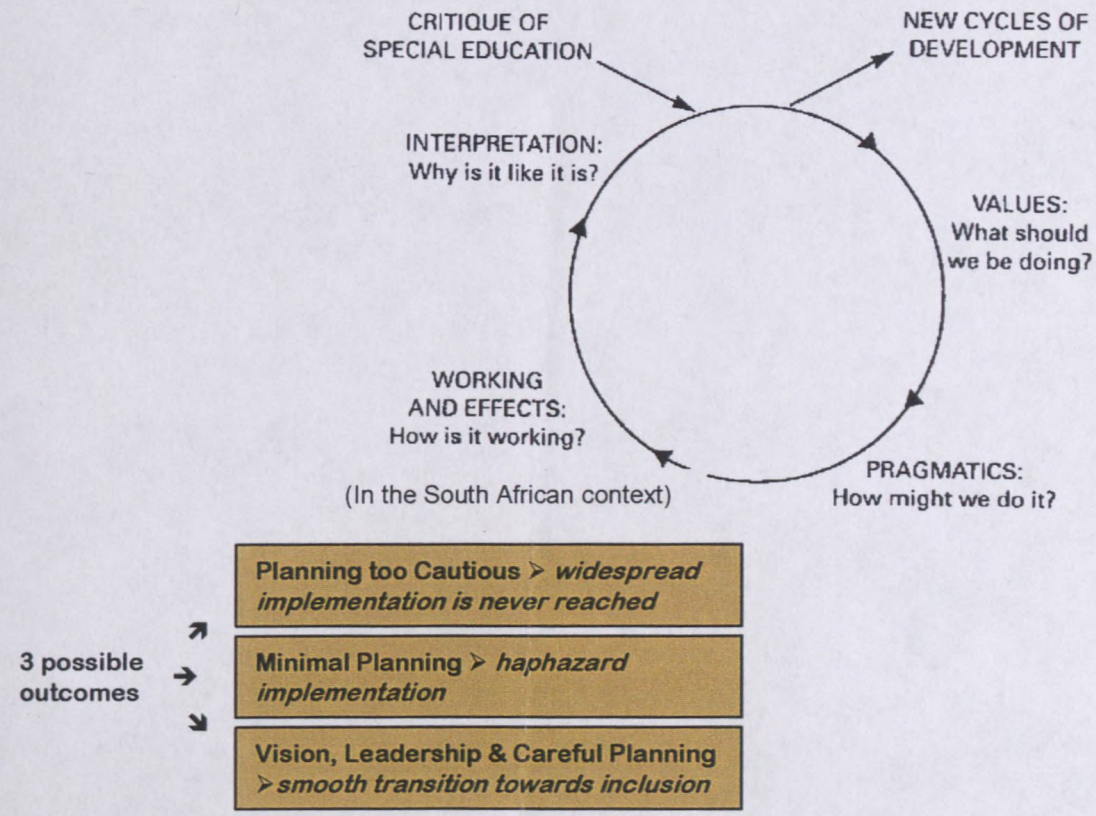
2.1 INTRODUCTION

An important part of my supportive role for the ten learners with Down syndrome included facilitating a more inclusive education process for them. In this chapter I review literature on inclusive education pertinent to the sub-question "What does inclusion entail and how should the process be implemented in South Africa?" According to Clark *et al.* (1996: 164) different units of analysis are chosen and different research frameworks are utilised within a continuum of opinions on inclusion varying from "...committed advocacy to historical analysis, critique and scientific objectivity". They argue that diversity of perspectives could enrich the field of inclusive education but also hold the danger of making the field unstable. They write:

> Or is 'inclusive education' simply a convenient umbrella term under which diverse, contradictory and counterproductive contributions will shelter for a short while until its inherent instability causes them to scatter? This is not a trivial point. Policy and practice are increasingly coming to reflect notions of inclusion. If those notions are incoherent, unfounded or contradictory, if they are inherently unstable and disappear as quickly as they have appeared, then it is vulnerable children, and not simply academic careers, that will suffer (Clark *et al.,* 1996: 165).

Secondly, at the outset of the study I asked various questions about inclusive education in an attempt to clarify my role in the project. Some of the questions I asked in clarifying my role related to the questions Clark *et al.* (1996:168) ask:
What should we be doing? How might we do it? How is it working? Why is it like it is? These four questions involve values, pragmatics, effects as well as interpretation and could constitute the field and possible cycle of development of inclusive education as shown in Figure 5:

FIGURE 5: A POSSIBLE CYCLE OF DEVELOPMENT IN INCLUSIVE EDUCATION



Adapted from Figure 12.1 (Clark *et al.*, 1996:173)

In the context of the four questions, various outcomes are generated by the inclusion initiative ranging from a continuum of productivity and excitement to problems and dissatisfaction. Figure 5 indicates that three possible outcomes are anticipated. First, exaggerated caution in planning could inhibit the full implementation of inclusion. Second, minimal planning may result in haphazard implementation. The third possible outcome embraces a vision, careful planning, leadership and preparation of all stakeholders, creating a smooth transition towards inclusion. Clear guidelines to facilitate the third outcome and practical directions for the educator, who will be engaged in the daily dynamics of the classroom, are however limited. Educators seek ways to respond to the legal and educational challenges put to them to ensure that all learners are accommodated effectively in the regular classroom. The challenge appears more complicated than initially anticipated and will require intense research and collaboration to ensure adequate preparation, of the community involved, for inclusion (Bradley, 1994:90;

Ferguson, 1995:283,285; King-Sears, 1996:232).

The literature I reviewed also shows that mainstream educators often insist that they are not trained to deal with learners with special educational needs and interventions in inclusive classrooms do not have instant or magical success. To bring about the implementation of new practices, educators need knowledge and training in a variety of new techniques and support in the practical application thereof. Discrepancies exist in what educators know, are capable of doing and what actually happens in the classroom (King-Sears & Cummings, 1996:217,218).

Inclusion however is not a field merely characterised by a unity of methodology and assumptions, but a complex and wide-ranging issue demanding investigation of social and realisation values. There is an internal dynamic in this field which needs to be followed and could lead beyond inclusion to a more humane and democratic society (Clark *et al.,* 1996:177*).* Ferguson (1994:285) relates to this by arguing for systemic inclusion:

> A more systemic inclusion will replace old practices, which presumed a relationship between ability, service and place of delivery, with new kinds of practice (in which groups of teachers work together to provide learning supports for all students).

The implication of this for South Africa is that, according to Donald *et al.* (1997: 22) we need to create a culture of learning within the ecosystem before our education system can become more inclusive. This would include access to education for all learners, a flexible structure, relevance to the South African context, usefulness for society as a whole, combined with a culture of care and respect. This notion relates to the framework of my study and within this context the questions formulated in Figure 5 will be used to explore the abovementioned sub-question in this chapter. During the discussion, reference will be made to the related levels of the ecosystem, as I assume it could eventually result in clearer directions for educational psychologists who need to apply the theory in practice. I also relate various perspectives on and strategies to implement inclusion to the South African context by using the **Framework for Action (Table 1)** as adapted from the **Salamanca Statement** (UNESCO, 1994:59–60) as a guideline for the literature review. The various elements of this framework, as indicated in Table 1, will serve as topics for the discussion in this chapter:

TABLE 1: FRAMEWORK FOR ACTION
New thinking in special needs education
Guidelines for action at the international level
Policy and organization
School factors
Community perspectives
Resource requirements
Guidelines for action at national and regional level

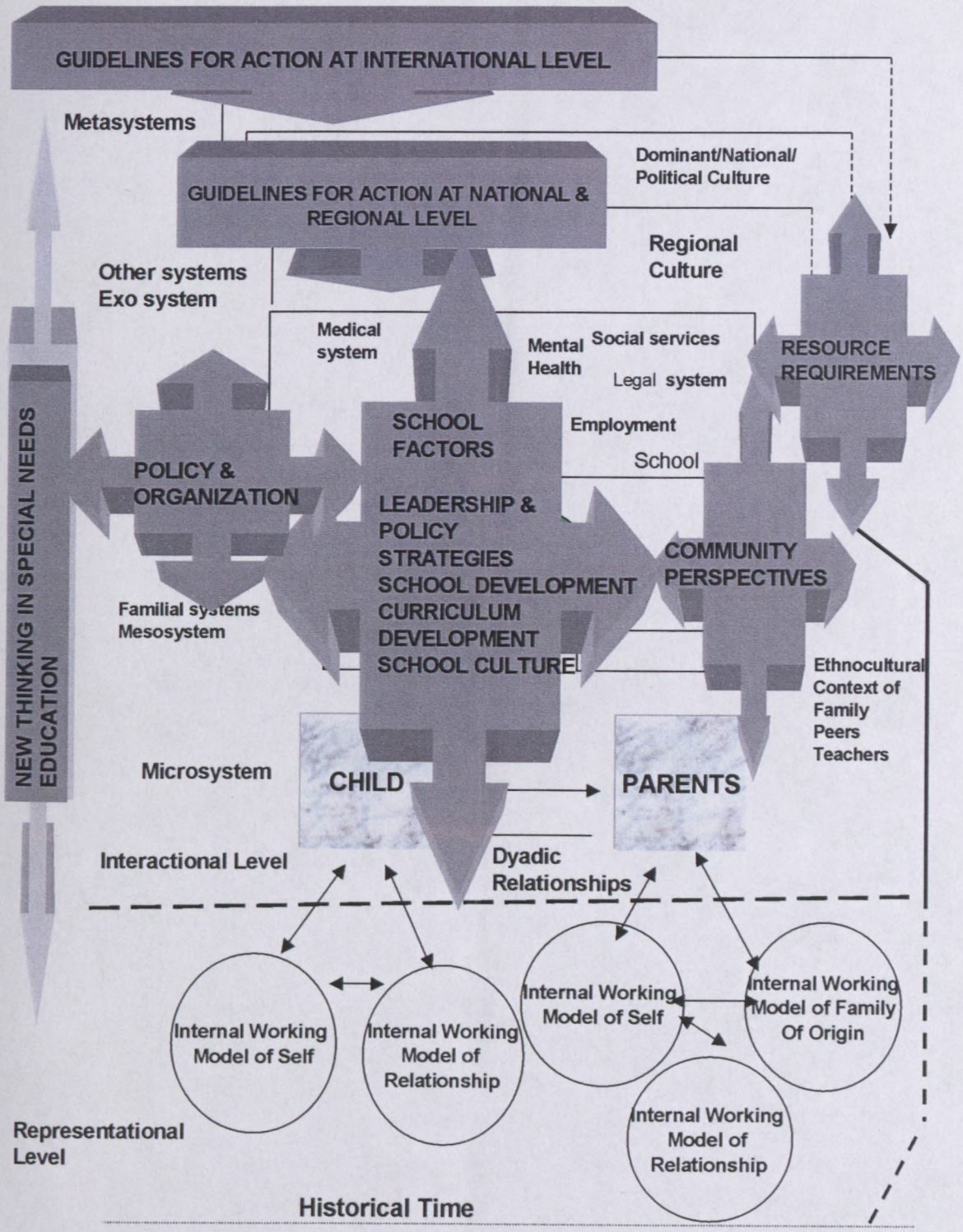
Schaefer and Buswell (1996:49) argue that advocates for improving schools need to join together and endorse the principle that 'good schools are good for all students'. They further suggest ten critical elements for creating inclusive and effective schools. These elements are formulated into the following stages:

Stage one:	Develop a common philosophy and a strategic plan
Stage two:	Provide strong leadership
Stage three:	Promote school-wide and classroom cultures that welcome, appreciate and accommodate diversity
Stage four:	Develop support networks
Stage five:	Use deliberate processes to ensure accountability
Stage six:	Develop organized and ongoing technical assistance
Stage seven:	Maintain flexibility
Stage eight:	Examine and adopt effective teaching approaches
Stage nine:	Celebrate success and learn from challenges
Stage ten:	Be knowledgeable about the change process but do not allow it to paralyse you

These elements have been integrated with De Jong's (2000:351) core conditions for "enabling school level environment" and the framework of Davidoff and Lazarus (1997) which was adapted to a model of an inclusive school by Lazarus *et al.* (1999:63) and Figure 6 illustrates a framework for action towards inclusive education which I have adapted from an ecosystemic framework for the purpose of my study.

FIGURE 6: INCLUSIVE EDUCATION - A FRAMEWORK FOR ACTION

(Adapted from O'Connor & Ammen,1997:8; UNESCO, 1194:59-60; Lazarus et al, 1999:61)



2.2 NEW THINKING IN SPECIAL NEEDS EDUCATION

The Salamanca Statement (UNESCO, 1994:62) emphasises the issue of new thinking in special needs education as this relates to the international trend in social policy of the past two decades, where the inclusion of all individuals into society has been promoted. Murphy (1995:211) notes that significant changes have been observed in international education over the last 15 years, but the system should be changed if the desired future outcomes are to be achieved. Different countries handle special needs in varying ways and according to UNESCO (1994:62), countries with few special schools should concentrate on developing inclusive schools combined with specialised services available to the majority. Educational planning at all levels should concentrate on all learners and UNESCO (1994) assert that inclusive schools seem to be the best point of departure for the inclusion of learners with special needs towards eventually achieving optimum educational progress and socialization. UNESCO (994:61) further argues:

> Assignment of children to special schools – or special classes or sections within a school on a permanent base should be the exception, to be recommended only in those infrequent cases where it is clearly demonstrated that education in regular classrooms is incapable of meeting a child's educational or social needs or when it is required for the welfare of the child or that of other children.

Kavale and Forness (2000:279) assert that postmodernism influences this general discourse on special education and inclusion and challenges "the possibility of creating global, all-encompassing worldviews". By way of elaboration Rosenoau (1992:8), as cited by Kavale and Forness (2000:279), describes the differences between modern and postmodern as:

> Those of a modern conviction seek to isolate elements, specify relationships, and formulate a synthesis: postmodernists do the opposite. They offer indeterminacy rather than determinism, diversity rather than unity, difference rather than synthesis, complexity rather than simplification. They look to the unique rather than to the general, to intertextual relations rather than causality...With a [post]modern perspective, social science becomes a more subjective and humble enterprise as truth gives way to tentativeness.

The authors further argue that postmodernism advocates "radical transformation" as the only solution, but perhaps a more gradual approach to change based on "substantive real-world empirical research foundation" may offer more responsible

solutions. This statement, however, opens the contentious debate on the validity of research and according to Kavale and Forness (2000:279) "advocates for inclusion have failed to provide a progressive research program". Naicker's (1999:13) dialogue further elaborates on the complexity of the debate when he cites Fulcher (1989) in describing the following discourses in the field of specialised education: First, there is the medical discourse with the emphasis on disability, second, the charity discourse with the focus on "benevolent humanitarianism", third, the discourse that views individuals in need of special education as "objects of pity and eternally dependant on others" which benefits the occupation of the professionals who benefit from the labels. Fourth, Naicker (1999:14) mentions the lay discourse, which is focused on prejudice and finally, the rights discourse that is "committed to extending full citizenship to all people".

The new ways of thinking about special needs in South Africa is summarised by the Department of Education (1997) in the following way:

> The present system of specialised education has both strengths and weaknesses. The development of specialised learning contexts (classes and schools) arose out of the failure of the ordinary school system to address the diverse needs of all learners and to provide enabling mechanisms to minimise and remove learning breakdowns.
>
> Good specialised schools and classes have offered enriching learning programmes; adaptations that allow the learner to access the curriculum (including the provision of assistive devices and adapted technology, adapted sport and physical education programmes, and accessible cultural programmes); specialised educator competence; dedicated teachers and support from external 'sponsoring' bodies which have been willing to support learners with 'special needs' (Department of Education, 1997:33).

The Report of the National Commission on Special Needs in Education and Training and the National Committee for Education Support Services (Department of Education, 1997) takes the following position, which places South Africa's vision towards new thinking in line with the Salamanca Statement and international trends:

> It is universally recognised that the main objective of any education system in a democratic society is to provide quality education for all learners so that they will be able to reach their full potential and will be able to meaningfully contribute to and participate in that society throughout their lives.
>
> In a country where the education system is premised on the notion of a rights culture, it is imperative that the system is able to not only to prevent learning breakdown and exclusion, but that it is also able to promote equal opportunities for effective learning by all learners. In order for the system to do this it is imperative

> that policy aimed at the creation of education and development for all learners recognise a range of different needs among the learner population. Most importantly, such policy needs to be based on an analysis of those factors which ensure that the education system remains inaccessible to a significant majority of learners and which continue to lead to high levels of learning breakdown (Department of Education, 1997:13).

With respect to this Karagiannis *et al.* (1996: 11) note that educational organisations and environments are obliged to adapt to and address the needs of all learners, barriers need to be removed and the rights of citizens need to be restored. They also suggest that all learning support should be integrated and restructured to allow all learners to benefit from the support. This creates a new worldview in education where diversity is the norm and not the exception. Parrilla (1999:106) notes that "the more schools are experienced" in inclusive education "the more innovative they become."

Ballard (1996:2–4) explores the issue of who determines the worldview that drives school organisational arrangements and finds that a small group of individuals such as educators and psychologists may drive the new way of thought. It may however be used as a power mechanism and become harmful to those whose experiences are excluded. Ballard (1996) further argues that inclusion and exclusion cannot coexist and inclusion does not merely modify exclusion, one must displace the other, as they are too different from each other. The culture of special education will continue as long as the word "special" remains in the vocabulary of education. In relation to this Clark, Dyson, Millward and Skidmore (1996:82) note:

> Special needs is still conceptualised as essentially remediable – a pathology with a cure. This leads us to speculate as to whether a non-pathologising conceptualisation of special needs is possible – and if so what would it look like.

Clark, Dyson, Millward and Skidmore (1996:78) further assert that the changing worldview in education is founded on the assumption that special education is "a consequence of inadequacies in the current state of development of mainstream schools". Dysfunction emerges when schools are not collaborative, reflective and problem-solving institutions. The task of schools would imply surfacing and testing assumptions, advocating and reconstructing resolutions without finding a final or single "solution" to the complex nature of individual needs. A state of heightened awareness is created and an energy bound in fear can be redirected towards

problem solving (Clark, Dyson, Millward & Skidmore, 1996:78,79,82–92; King-Sears, 1996:232; Karagiannis *et al.,* 1996:4; O'Brien & O'Brien, 1996:29).

Mallory and New (1994:322) assert that the socio-cultural context of the learner and an active role played by the learner should be emphasised. They view the classroom as a community with socially mediated learning, relevant curriculum and meaningful, authentic assessment. Clarke *et al.* (1996: 41) note that there are no short-term "quick-fixes" to meeting special educational needs in the mainstream classroom. Research of a high standard however could at least reformulate the questions and give direction for solutions. In respect of this, Karagiannis *et al.* (1996:3-4) note the following interdependent practical components for inclusive education:

- support networking ("the organisational component", indicating coordination of teams and individuals who support each other by formal and informal connections);
- collaborative consultation and teaming ("the procedural component", meaning individuals with expertise working together in the planning and implementation of programmes);
- cooperative learning ("the instructional component" which creates a classroom atmosphere in which diverse learners can achieve their potential).

Bradley, King-Sears and Tessier-Switlick (1997: 56–57) note that problems previously seen as learner characteristics should now be evaluated in the context of instruction and methods. Educators cannot continue to "do business as usual". According to Bradley, King-Sears and Tessier-Switlick (1997:57) establishing effective inclusive schools requires effort, commitment, conviction and good will from all stakeholders in the system. It will also require systemic change at various levels as UNESCO (1994:39) asserts:

> If inclusive education is to become a reality, the need for teacher education involves every teacher in every school, as well as all those training to be teachers. It calls for the changing of attitudes and levels of awareness in professional staff and volunteers working in related fields, such as pre-school and post-school education, staff of agencies in the related fields of health, social welfare and employment, as well as planners, administrators and decision-makers…

Lazarus *et al.* (1999:53) also support a systems approach where the focus is on the barriers that the learner experiences rather than a focus that there is something wrong with the learner. These authors further assert that identification and assessment of barriers are crucial. Schools should strive toward becoming health-promoting schools where "health" is viewed as "physical, psychological, social and spiritual well-being rather than absence of disease", with a focus on development and not merely on solving problems. Lazarus *et al.* (1999:61) cites the World Health Organisation's (1993:1) description of a health-promoting school:

> The health-promoting school aims at achieving healthy lifestyles for the total school population by developing supportive environments conducive to the promotion of health. It offers opportunities for, and requires commitments to, the provision of a safe and health-enhancing social and physical environment.

System-wide change can be facilitated by collaboration. Collaboration as an interactive process enables diverse expertise to generate solutions to mutual problems and enables educators to meet diverse needs (shared expertise and joint ownership). It shifts the organisational paradigm from professional bureaucracy to *ad hoc* problems-solving teams, using collective knowledge and skills, inventing personalised education and increasing the possibility that basic human needs are met (such as freedom of choice, empowerment, fun and others) (Villa, Thousand, Nevin & Malgeri, 1996:170173). Williams (2000:4) supports whole-school development and emphasises that "although inclusion focuses on marginalised groups, it increases the effectiveness of the system in responding to all learners".

From the perspective of the above dialogue, transformation should therefore focus on the entire system, with special attention to the core of the system to ensure the facilitation of sustained change:

> System-wide or whole-school mandates can 'grease the wheels' for the development of inclusionary practices. Evidence has shown that if implementation is successful and improved student performance is observed, favourable attitudes often result. Many teachers are no longer waiting for their school systems to be ready to change, but instead are attempting individual and small-group change in order to ease the way for systemic change (Bradley, King-Sears and Tessier-Switlick, 1997:67).

Engelbrecht (1999:9) also emphasises the need for systemic change, which would imply practical and personal components such as addressing "values, opinions,

attitudes and concerns of educators, learners, administrators and parents in the systemic structure of schools and communities". This type of change should be viewed as a challenge and an opportunity rather than a threat, although one cannot assume that all stakeholders will be equally excited. There should be consideration and normalisation of the phases that individuals experience during change, which are identified as denial, anger, acceptance and taking action. Some change programmes strike right at the teacher's professional pride, challenging their competence and power, which then creates resistance. Resistance to change can be approached by identifying the sources of resistance and creating an efficient model for change. Even initial acceptance of change can later develop into resistance. The desire to change does not imply that the educator will be able to cope with all the phases of implementation, as there may be an element of "uninformed optimism". This could develop into "informed pessimism" but if support is provided it could develop into "hopeful realism" followed by "informed optimism" (Charney, 1994:30,33; Clark *et al.*, 1996: 26,29; Bradley, King-Sears and Tessier-Switlick, 1997:61–63). People resist change because of the personal adjustments they need to make to the situation. Reactions such as fear are influenced by the educator's belief about the innovation, perceptions of own abilities, settings of change and the number of other changes involved (Bradley, King-Sears and Tessier-Switlick, 1997:57, Stewart, 1993:23).

Individual concerns during the process of change are shown in Table 2. Bradley, King-Sears and Tessier-Switlick (1997:60) note that concerns may arise at any stage of the process and support is then needed. Educators move through the stages at different rates. The innovation can be maintained by identifying these individual stages through listening to comments, acknowledging feelings, providing support and promoting movement of the individual. Although change is personal it must be embedded in the school structure. Gradual transformation has a better chance of success than abrupt change. The authors further argue that a shared vision and a solid plan are important in the process of educational transformation. Critical thinking skills also facilitate transformation and, as De Jong (2000:252) assumes that teachers "are the primary driving force of change", he writes that an educational psychologist could contribute to the development of health-promoting schools through mediation and support towards developing critical thinking skills" (De Jong, 2000:354).

TABLE 2: INDIVIDUAL CONCERNS DURING THE PROCESS OF CHANGE			
Focus	Stage	Description	Typical statements
Self	0 - Awareness 1 - Informational 2 - Personal	□ Educators feel they will not be affected □ At personal level: concerned about effect on them □ Concerned about role changes	"What is inclusion anyway?" "I would like to know more about inclusion?" "Who will be responsible for grading the students with disabilities"
Task	3 - Management	□ Management of tasks enabling inclusion, support is critical	"We need to plan different levels of outcomes for social studies"
Impact	4 - Consequences 5 -Collaboration 6 - Refocusing	□ Effect on growth of the learners (academic, social and behavioural) □ Trying practices, teamwork, pooling expertise and resources □ Comfortable with their implementation (evaluate, combine)	"How do students' scores on class assignments differ from before we used lesson organizers?" "We need to meet regularly..." "This method works really well when we combine it with Dimensions of learning"

Adapted from: Figure 3–1 (Bradley, King-Sears and Tessier-Switlick, 1997:60)

Druker and De Jong (1996:21) assert that the educational psychologist could play a role facilitating teachers toward more systemic thinking, but the complexity of the process should not be underestimated. Staff should therefore not be neglected "as a target for change", but they should also be supported. De Jong (2000:355) cites Fullan (1991:355) on the issue of personal meaning:

> Neglect of the phenomenology of change – that is, how people actually experience change as distinct from how it might have been intended – is at the heart of the spectacular lack of success of most social reforms.

A systematic procedure to address change implies that the variables that have an impact on change need to be considered and the two factors 'system' and 'people' should specifically be prioritised. It is essential that a vision should be identified and a plan be developed, as seen in the following sequence (Bradley, King-Sears and Tessier-Switlick, 1997:67):

Donald *et al.* (1997:16) point out that not only structural changes but also issues of quality need to be addressed to achieve equity in South African educational reform. South Africa needs more than new policies and structures. Participation,

engagement, questioning and learning from all stakeholders at all the levels of the ecosystem, combined with changes in values, understanding and actions are essential. These requirements predict a slow, challenging process of change. The Department of Education (1997) has compiled a clear vision, incentives have been initiated, suggestions on resources have been made and an action plan has been designed. As a point of departure for effective change, the vision and principles are first quoted. The incentives, resources and action plan will follow later in the chapter.

> The NCSNET/NCESS envisage an education and training system that promotes education for all and fosters the development of inclusive and supportive centers of learning that enable all learners to participate actively in the education process so that they can develop and extend their potential and participate as equal members of society" (Department of Education, 1997:65).

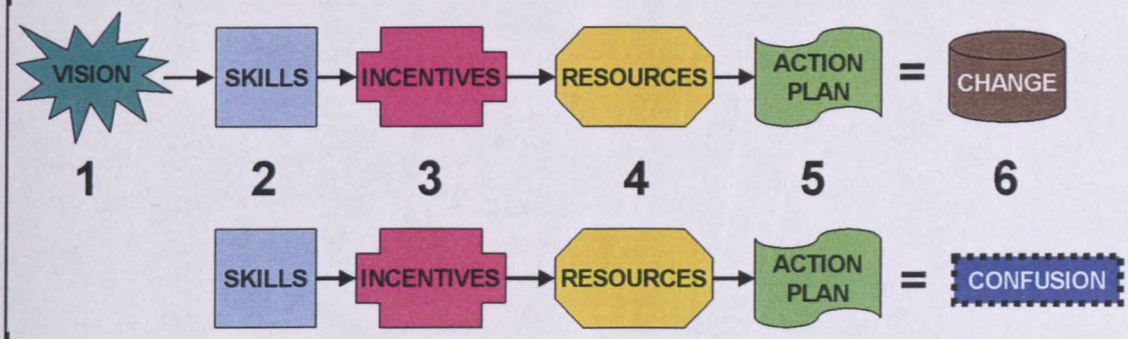
O'Brien and O'Brien (1996:31) state that once the vision has been established in the process of inclusion, current barriers should be identified and then reformed. They also warn that although activities may be labelled as inclusive there may still be no transformation in practice and inclusion could easily be thwarted and fail.

Mitchell (1999:4) argues that the following approaches bring about change: "adding on to existing knowledge" where outside experts (such as educational psychologists) often have to provide the knowledge; second, adapting "existing arrangements by examining them in the light of new ideas" and third, seeing "change arising from a process of reflection upon existing procedures in order to make sense". They also assert that:

> Soliciting input from the educators involved, providing information, time, training and resources, and maintaining patience as people adjust to and incorporate a new philosophy and structure is essential for the change to inclusion to be successful (Bradley, King-Sears and Tessier-Switlick , 1997:810).

Lazarus *et al.* (1999:58) suggest organisational development for managing change, which encourages the development of an "'effective' teaching and learning environment in the context of particular values and goals". Sensitivity to the reactions to change is important, but the process must not be slowed down unnecessarily. Attitude change does not have to precede behavioural change; the change should be implemented and will facilitate the attitude change (Schaefer & Buswell, 1996:62).

FIGURE 7: SYSTEMATIC PROCEDURES TO ADDRESS CHANGE



(Adapted from: Bradley, King-Sears and Tessier-Switlick, 1997:68).

Ferguson (1995:287) encourages changes in three directions:

- Move away from schools that are structured according to ability, towards structure around the learner's diversity and create a wide variety of learning opportunities.
- Move away from teaching approaches that emphasise the educator as disseminator of content, towards approaches that emphasise the role of the learner in creating knowledge.
- Change the view of the school's role as one of providing services to one of providing support for learning.

In summary, Ferguson (1995:287) asserts that:

> Valuing diversity and difference, rather than trying to change or diminish it so that everyone fits some ideal of similarity, leads to the realization that we can support students in their efforts to become active members of their communities. No longer must the opportunity to participate in life wait until some standard of 'normalcy' or similarity is reached.

Staub and Peck (1994) argue that the outcomes for all learners could be positive. Typical concerns that are voiced include the question whether learners learn undesirable behaviour in inclusive classrooms and whether academic progress will be impaired. The authors note that inclusion does not harm other learners, but the available research is limited and the studies focus on an early childhood level. Karagiannis *et al.* (1996:5) note that academic and social gains can be facilitated.

Advantages are described as acceptance of diversity, development of social cognition and self-concept, development of personal principles and friendships. Students serve as role models for each other. Inclusive environments enhance students with disabilities, educationally, socially and occupationally and in general, time is used far more productively. Children have the opportunity to prepare for life in a diverse *community*. Eliminating problems with labelling are viewed as natural consequences of interaction as communication. Through inclusive education the social value of equality is taught to students, reinforcing the idea that differences are respected and accepted. Schools need to promote social acceptance, peace and cooperation (Barry, 1994:6; Karagiannis *et al.*, 1996:4-8; Vlachou, 1993:95).

Karagiannis *et al.* (1996:4) emphasise these advantages:

> When proper arrangements are present, inclusion works for all students with and without disabilities in terms of mutually held positive attitudes, gains in academic and social skills, and preparation for living in the community.

Segregated placements of students are viewed as harmful academically, socially and occupationally, and create a "sense of unrealistic insulation" (Karagiannis *et al.*, 1996:6; Vlachou, 1993:95; Bradley, 1994:81–94). Staub and Peck (1994:39) suggest that:

> including children with disabilities in regular public school classrooms is stimulating exactly the kind of experience in the lives of children, and the kind of reflective dialogue among adults, that is necessary to achieve change in the values and ethics underlying public education policy.

Karagiannis *et al.* (1996:6) believe inclusive education holds several benefits for teachers. Through transformation of society and education, teachers receive the opportunity to enhance their social skills "in an atmosphere of collegiality, collaboration, and peer support". Peer collaboration improves professional capabilities with visible effects on student learning. Sebba and Ainscow (1996:15) support these advantages and also note that teachers become aware of educational reform, elevate their own status and take part in decision-making. They also indicate that school systems become more effective in serving needs if teachers are provided with training and support towards planning for the class as a whole (make all activities inclusive), use of natural resources for support (such as the pupils), critical reflection, creativity and collaboration (Sebba & Ainscow, 1996:13–16). Clark *et al.* (1996:19) do however hold that various factors such as

policy changes, lack of resources and time, workload, and learners' behavioural problems, to name but a few, may serve as sources of stress. Forlin *et al.* (1996:203) describe teachers' stress as "an interactive process, which occurs between teachers and the teaching environment, which leads to excessive demands being placed on the teacher and resulting in physiological or psychological distress". Clark *et al.* (1996:20) assert that unresolved stress may lead to ill health or burn-out and reduced effectiveness. Forlin *et al.* (1996; 213–215) do however also argue that the principals in their study felt that inclusion is less stressful than initially perceived. These results emphasise the need for studies on teacher morale and methods to support low teacher morale. Bradley (1994:88) notes that educators may have difficulties with role changes, especially concerning instructional preparation, and could cause resistance toward role changes. Educators then oppose the position of "being caught between inclusion and test score accountability" (Bradley, 1994:87). Klassen (1994:35) notes that teachers' perceptions and their attitudes towards their training, experience and competence in teaching learners with special needs are important. Klassen (1994) further argues that research is needed on ways to prepare teachers and prevent teacher apathy towards inclusion. This type of research will also direct future research.

Engelbrecht (1999b:25) confirms from research done in South Africa that "pre-service teachers will benefit from increased knowledge, contact and understanding of individuals with disabilities". Baker and Zigmund (1995:170) point out that the special education teacher is often described as "Jill-of-all-trades" in the new role of teaching learners with special needs.

The above scenario could be problematic, but Hines (1994:4) asserts that the collaboration between special schools and mainstream schools established a partnership between special and regular education, which is viewed as a "ray of hope in the future of special education". Shanker (1994:18) relates to this argument by noting that school boards, government departments and legislators could support inclusion for the sake of saving on expensive special education services rather than for the sake of the child and advocacy groups warn that a "one-size-fits-all approach will be disastrous for the disabled children themselves" (Shanker, 1994:18).

Integrating a segregated school needs much preparation and often the learner is stuck with a "Velcroed" adult hovering as an assistant over the learner and causing these learners to be "in" the class, but not "of" the class (Bradley, 1994:88). Teachers also referred to students as "my inclusion student": "It seemed to us that these students were caught inside a bubble that teachers didn't seem to notice but that nonetheless succeeded in keeping other students and teachers at a distance" (Ferguson, 1995:284). Certain overriding assumptions then remain unchanged and are clearly communicated: the learner with special needs is 'irregular', the learner needs special attention which the regular teacher is unable to provide, and the special educator is the officially designated provider there (Ferguson, 1995:284).

Inclusionists argue that all children learn best in mainstream education, that the goals of social equality are reached by inclusion and that pull-out programs violate the civil rights of learners. These arguments are based on the constitutional rights of learners, which makes inclusion a political stance rather than educational one. But what if learners learn less? What becomes of the primary purpose of education, which is to educate? (Smelter, Bradley, Rasch & Yudewitz, 1994:37). Murphy (1995:211) suggests that the additional effect of inclusion on cognitive development will probably be minimal from a school improvement perspective. The payoff for a huge investment may consequently be small.

Inclusion is often supported from the "social benefit" angle, but how salutary are these outcomes truly? (Smelter *et al.,* 1994). Conflicting data is observed on the improvement of social skills and self-esteem. Negative self-worth often develops due to peer rejection. There are also varying views on placement issues. Some are of the opinion that all learners need to be included (regardless of the extent of their challenge), and others feel only a balanced ratio of handicapped learners or those with less severe challenges should be included (Klassen, 1994:35). Smelter, Bradley, Rasch and Yudewitz (1994:38) argue that:

> Most children tend to ostracize and isolate peers whom they find abusive and disturbing. Still more alarmingly, a small number of children actually mimic aberrant behaviour, thereby overstimulating the child with the behavioural disorder and creating an ever-broadening spiral of disruption.

In this regard Klassen (1994:34) suggests that social skills training for learners

with special educational needs and encouragement of positive peer attitudes are essential prerequisites for the success of inclusion. Klassen (1994:34) further expresses the concern that research supporting the success of inclusion has produced contradictory results especially in the field of comparing and assessing academic progress in inclusive versus segregated educational contexts. Learners' discomfort with modified learning programs, inadequate training of educators and reduced teacher expectations for these learners complicate the issue further. Bradley (1994:88) asserts that studies revealed that children with a disability showed lower self-esteem than their peers when educated together. McCormick and First (1994:30–36) mention a number of conflicting perspectives on the effect of inclusion: First, the affordability of full inclusion is questioned. Second, the authors voice the assumptions that inclusive education is not the answer for all special needs. Third, priority is given to parental preference but parents may exclude a learner for personal reasons. An injustice may be done to mainstream school programmes as adequate resources are currently not available. This issue questions the principle of basic human rights. O'Neil(1994:8) argues that a continuum of options should be available to parents and focuses on the issue of "What does the child need?...What's the least restrictive environment in which we can provide these services?" (Kaufman, O'Neil, 1994:11).

Shanker (1994:20) mentions other concerns such as the issue of funding for the support of severely disabled learners, the responsibility of medical support such as the changing of catheters and the fear of violent learners who, by law, are allowed to stay in a particular school environment. Kaufmann (O'Neil, 1994:8) warns that it is coercive to force everybody into inclusion, as the full range of individual needs should be considered and "other placements should also be considered to serve the needs of the learner in the best possible way".

The above may be called "substantive issues" within the context of organisational development (OD), as described by Druker and de Jong (1996:20). The concept "substantive issue" is defined as "an issue which emerges as especially significant in the process of doing OD" and which could "create possibilities" and "serve to contain the process". The educational psychologist could follow Schmuck and Runkel's strategies (1985:12), as cited by Druker and De Jong (1996:20), towards consultation, which include consultative assistance, content consultation and process consultation. It is however important that change, which can be facilitated

by the involvement of school staff, should be sustained. South Africa needs to develop a culture of lifelong learning among staff who also need to "own the change process" (Druker & De Jong, 1996:25).

2.3 GUIDELINES FOR ACTION AT INTERNATIONAL LEVEL

International collaboration is important, especially in developing countries such as South Africa where international support is essential for funding pilot projects. The need for information and comparative studies between countries is essential. Partnerships at the level of the exosystem (regional level) could be powerful in the planning of joint activities. Regional and international associations should be formed, of which UNESCO is an example (UNESCO, 1994:45). The Department of Education (1997) suggests the following strategies for the development of an integrated system of education:

> The separate systems of education which presently exist ('special' and 'ordinary') need to be integrated to provide a system which is able to recognise and respond to the diverse needs of the learner population. Within this integrated system, a range of options for education provision and support services should be provided. Learners should have the ability to move from one learning context to another (e.g. from ECD to GET, from a specialised center of learning to an ordinary center of learning, or from a formal to a nonformal programme). The system of education should be structured in such a way that, irrespective of the learning context, opportunities for facilitating integration and inclusion of the learner in all aspects of life should be provided (Department of Education, 1997:68).

This statement could be related to Inclusion International's Constitution (2000:1), which has as its vision to "advance the interests of persons with intellectual disability, without regard to nationality, race or creed, by securing on their behalf from all possible sources, the provision of remedial, residential, educational training, employment and welfare services, to create a common bond of understanding among parents, families and friends of persons with intellectual disability, to promote the interests of persons with intellectual disability and their families by brining about cooperation among organizations representing and/ or supporting them". Strategies towards reaching this vision include collaboration and the sharing of knowledge, cooperation with international organisations, encouragement of international societies, the study of legislation and the provision of services for their well-being. Their work is based on four principles: full inclusion

into society, full citizenship, self-determination and family support (Steenlandt, 1995:4).

2.4 GUIDELINES FOR ACTION AT NATIONAL AND REGIONAL LEVEL

Guidelines for action at national level constitute the second part of the Framework for Action (Table 1) as illustrated in the introduction to this chapter. The various topics included in this section were also selected from the Framework of Action. I used these guidelines to inform and plan my actions as supporting psychologist during the research project. Due to the vast amount of literature available, only a selection of literature relevant to my role as supporting psychologist was integrated.

2.4.1 POLICY AND ORGANIZATION

Special needs education cannot advance in isolation. It must be part of an overall educational strategy and, indeed, of new social and economic policies. This requires a review of the policy and practice in every subsection within education, from pre-school to universities, to ensure that the curricula, activities and programmes are maximally accessible to all (UNESCO, 1994:39). Action should be taken in a nationwide strategy that strives for quality education for all and this includes community-based rehabilitation and inclusion. A clear policy on inclusion, financial provision, public information efforts, orientation and staff training, as well as support services are essential in the attempt to create inclusive schools. Where special schools are attended, learners should still be included in other systems. The rights of learners with severe needs must be respected to promote maximum independence. Coordination between all educational, health, employment and social services and authorities, combined with cooperation with international partners is essential. The inclusion debate has become politicised and extremely complex in low-income countries where there are existing deficiencies in basic needs (Eloff, 1997:8,9; Cavanagh, 1994:77; Sebba & Ainscow, 1996; UNESCO, 1994:65–67).

Naicker (1999:15) notes that the South African Federal Council on Disability

(SAFCD) advocated a "single inclusive education system for South Africa" during the phase of a new democracy arising in South Africa. The South African Federal Council on Disability (1995:2) emphasised the right of learners with special educational needs to education "at all levels in a single inclusive education system" in a statement where twenty-eight organisations and institutions were involved. This emphasises the intense international and national voice for inclusive education. In this regard Edcent Williams, Chief Director of the Department of Education (2000:1) emphasises the South African government's commitment to transforming educational policy. "There is also a commitment to the provision of basic education for all as a social right" (Williams, 2000:1).

In the report on Quality Education for All (Department of Education, 1997), the South African Schools Act (1996) and the Education White Paper 6 (Department of Education: 2001), South African policy makers also demonstrate this attitude towards individual needs. The following quotes show the commitment made in these documents:

> Major policies and initiatives emerging within education in South Africa are supporting the development of a system that is more responsive to the needs of all. Within the context of curriculum, the National Qualifications Framework (NQF), the outcomes-based-education (OBE) approach, and Curriculum 2005, are examples. Health promoting schools initiatives and whole school/organisation development projects are amongst the strategies being used to engender institutional development and system change (Department of Education, 1997:87).

The addressing of a diversity of learner and system needs and the development of mechanisms and processes to enable learners and the system to overcome barriers must be infused into all processes of decision making and areas of responsibility for effective governance (Department of Education, 1997:137).

> The S.A. Schools Act (1996) stipulates that learners from grade 8 and higher should form representative councils and should be represented on school governing bodies. This Act states that public schools for 'learners with special needs' may be exempted from establishing a representative council of learners, and learners of eighth grade and higher should be included on governing bodies only "if reasonably practicable" (Department of Education, 1997:137).

> In this White Paper, we outline the Ministry of Education's commitment to the provision of educational opportunities in particular for those learners who experience or have experienced barriers to learning and development or who have dropped out of learning because of the inability of the education and training system to accommodate their learning needs (Department of Education, 2001:6).

This nationwide strategy needs to be reflected in the school policies (or mission statements), which embrace the principles of inclusion with the focus on the needs of the whole learner. This will facilitate full participation of all learners and other stakeholders, which is crucial in the restructuring of schools. When all stakeholders are consulted the task force that is formed takes responsibility and pride for continued success of implementing a strategic plan. Schools are often seen as loosely coupled systems, units working in isolation of each other. All involved need to be informed on developmental priorities and teachers should have the autonomy to make instant decisions (Schaefer & Buswell, 1996:50,51; Shanker, 1994:21). Wang, Reynolds and Walberg (1994:15) indicate that programs should also be developed that reduce all "set-asides", decreasing suspension and dropouts. Authorities may have to be challenged to create broad cross-departmental 'empowerment zones' for delivering efficient child and family services. Public dialogue must also be encouraged together with a better organisational understanding of the school (Wang *et al.*, 1994:16; Vislie & Langfeldt, 1996:69).

Respect for diversity and individual rights is prioritised in the above statements and inclusion could create more efficient methods of using resources and serve more learners, but some educators fear that resources may be drained or that inclusion could be a means to justify budgetary cuts to the detriment of learners with special educational needs (McLaughlin & Hopfengardner Warren, 1994:8–9; Karagiannis *et al.*, 1996:11). The financial implications of efforts towards inclusion therefore need to be analysed, anticipated and planned to ensure effective cost accounting and budgeting. Analysing the finances of inclusion is a complex task as various factors determine what the actual expenses of inclusive schooling efforts would entail. Higher investment in the school years might for instance lead to lower support costs later. Schools sometimes economize by using paraprofessionals, parents and peers in instructional roles, which could lead to a breakdown of learning due to their lack of training (McCormick & First, 1994:30,35; Baker and Zigmund, 1995:177).

> Various types of expenses can be identified such as the need for physical space, the redefinition of instructional time, the integration of support services and the need of resources such as paraprofessionals. Changes to facilities are not always due to inclusion and it is difficult to establish causal relationships (Mawdsley, 1995:28; McCormick & First, 1994:34; McLaughlin & Hopfengardner Warren, 1994:12).

In South Africa, new guidelines for funding need to be provided in the context of the current Government and Constitutional imperatives with the focus on the South African Schools Act (1996) (Department of Education, 1997:136). The following extract from the report of the Department of Education (1997) describes the future vision on funding:

> A funding strategy that ensures redress, sustainability, and facilitates access to education for all learners, should be pursued within an integrated funding system. Financial resources should cover both education provision and enabling mechanisms required to ensure that appropriate education is provided and that additional support is provided where necessary (Department of Education, 1997:84).

De Jong (2000:355) argues that the educational psychologist could play a role in relation to the development of policies on the abovementioned issues by interacting with influences from the metasystem:

> School psychologists straddle the external and internal worlds of a school. Presumably, with their background in cognition, it is likely that they have an insight into how people make sense and meaning of their worlds. With these 'assets', school psychologists can play a vital role in helping schools manage the recursive and often paradoxical nature of the relationship between their internal and external worlds.

2.4.2 SCHOOL FACTORS

UNESCO (1994:67) notes that changes are necessary in curriculum, school organisation, assessment, school ethos and all other aspects of schools to enhance the success of inclusion. A learner-centerd approach combined with flexible systems is a priority for successful education. Lazarus, Daniels and Engelbrecht (1999:46) note that understanding, assessing and action to address these barriers, as well as encouraging aspects which enhance inclusive education, present a challenge. I foresee that in this respect the educational psychologist could play a vital role as consultant. Lazarus *et al.* (1999:46) further note that the goal of building an inclusive school is to eventually develop an inclusive society where:

> all members of society are able to fulfil their potential and participate optimally, and where respect for and valuing of diversity in the context of social integration is an active value. They also indicate that this process enhances social integration in the school in the context of every learner's right to access to education which would include all "aspects of the curriculum", the ability of the "psychosocial environment" to "facilitate positive learning and development for all learners" as well as access to the physical environment (Lazarus *et al.*, 1999:46).

2.4.2.1 **Leadership**

Government officials and principals play an important role in making schools responsive to special educational needs provided they have the authority and training to do so. Teachers as well as other staff members should be actively involved. The principal has the responsibility for encouraging positive attitudes as well as arranging collaboration, support and defining roles (UNESCO, 1997:69, Hines & Johnston, 1996:711; Lazarus *et al.*, 1999:66).

Sage (1996:112) asserts that symbolic leadership implies that the manner in which management and other officials model symbolic and cultural forces constitutes a significant variable in the success of inclusion. The principal creates the atmosphere that all learners belong in the school and models collaborative behaviour. The process of staff development creates opportunities to identify leadership, reveal unrecognised skills and help to establish the norm of collaboration (Sage, 1996:113). Patterson (2000:19) asserts that principals need an understanding of special education support services, legislation, policies, district norms and funding. They also need to participate in lifelong education in the field of special education and leadership philosophy. It is also important that they be supported by district administrators.

Leadership roles need to include the following conditions and organisational arrangements (Schaefer & Buswell, 1996:51; Clark *et al.*, 1996):

- Effective leadership
- Staff involvement and commitment to collaborative planning
- Effective co-ordination strategies
- Attention to the benefits of enquiry and reflection
- A policy for staff development
- Support for teachers in acquiring new skills
- Research on effective ways of meeting all learners' needs
- Development of consistent school discipline
- Transformation of the school to a supportive community.

Leadership functions should be spread throughout the group and leadership should rather arise from knowledge and experience than authority (Schaefer &

Buswell, 1996:51). The school system should become a unified whole, not two parallel structures (general education and special education). Committed administrative personnel is required to communicate this vision with an emphasis on decentralisation. The school principal needs to adopt a strategy where a creative, dynamic organisational structure is formed with the belief that the system will have benefits for everyone. Role changes imply a shift "... of primary responsibility from the specialist to the generalist" (Sage, 1996:108).

The following beliefs and structures are viewed as essential in developing a policy that supports a shared culture of inclusiveness and a collaborative teaming process (Sage, 1996:109; Burello & Lashley, 1992:82–83; Thousand & Villa, 1992: 76; Sage & Burello, 1994:265; Sage, 1996:113; Porter; 1992:114):

- Everyone in the school is responsible for every learner's needs and the team should accept responsibility for one another as well. A feeling of "we are all in this together" is essential (Villa & Thousand, 1992:76).
- A unified system of education should be formed and labelling and separation should be prevented.
- The skills and knowledge of all educators should be applied to support each other and ensure the success of all learners.
- The belief that all learners benefit from participation should be adopted.
- Regular assessment of learners' needs is an essential task of all educators.
- Special educators and other educators are important members of the support teams.
- Services provided by special educators or specialists should be provided in the context of the general programme.
- Budgets and funding support the provision of service to all learners.
- Community services are coordinated at the school.
- Post-school adjustment of learners should be considered during programme evaluation.
- Team members need frequent face-to-face interaction and plan their own staff development as well.
- Interpersonal skills such as trust, communication, leadership, creative problem solving, decision-making, conflict management and self-reflection should be developed.

- Regular assessment of the team's functioning, relationship building and task effectiveness should be encouraged.
- Structures for accountability in mutually agreed responsibilities should be created.
- Teams should focus on outcomes for all learners.
- Co-planning for instruction in multiple settings is essential. Time is needed for teachers to plan lessons, modify materials for adaptations and participate in activities such as parent consultations.
- Planning and facilitating natural peer support is important.

Sage and Burello (1994) and Sage (1996:110–115) note that management should fulfill a facilitating role in this process as change cannot be forced. Management should promote openness to change, model risk-taking and reward honest attempts at creating an inclusive climate for all learners. Power and authority issues may become substantive issues, may operate within the team of consultants and may often be very subtle (Druker & de Jong, 1996:26).

> Finally, if a school embarks on a broad program of inclusive schooling, the degree to which the entire staff shares in providing the required effort must be monitored. Clearly, extra work is involved by teachers to implement such a program. Problems can result if the burden falls continually on a few motivated and/or willing staff members (McCormick & First, 1994:34).

2.4.2.2 **Strategies for school development**

Lazarus *et al.* (1999:64) assert that the school's vision and development plan should include goals towards addressing negative attitudes, facilitating access, procedures to prevent discrimination and establishing a school support team. Pro-active processes need to be established to prevent discrepancies between written support plans and the actual implementation. A lack of understanding of the key elements for the success of inclusion could create dysfunctional support. Teams find that implementing effective planning processes and strategies save time and frustration and create more effective outcomes. A goal/activity matrix or COACH (Choosing options and Accommodations for Children) is often used. However research is needed to enhance this knowledge base (Wang *et al.*, 1994:15; Schaefer & Buswell, 1996 (55–57):

> The emphasis should be on recognizing and celebrating success and to learn from

challenges. Success should be allowed to become a pervasive element of the school's culture (Schaefer & Buswell, 1996:60,61).

2.4.2.3 **Strategies for curriculum development**

The General Education Band

(Pre-school, Foundation Phase, Intermediate Phase and Senior Phase)

The literature reveals differences but also similarities between early childhood regular and special education and it is essential to remove barriers and create collective sharing. School readiness and screening programmes create barriers to learning and could interfere with early intervention services in the foundation phase. This paradigm shift will have intense implications for educators' perceptions of learners as the success of learners will depend on the ability of the school to modify their instructional programme and prevent exclusion of learners (Appl,1995:23,25; Atwater, Carta, Schwartz, & McConnell, 1994:195; May, Kundert, Nikoloff, Welch, Garret & Brent, 1994:290; McLean & Hanline, 990:63; Williams, 1991:304).

Due to the diversity of learners there is no single mode of teacher-student interaction or pedagogical style available that will be effective for all learners. Pre-school phase educators have an important role to play towards advocating inclusion as learners in pre-school have more positive attitudes toward their peers with special needs, and in general learners with special needs feel more accepted in social interactions during their early years of education (Fewell & Oelwein, 1990:115; Papadopoullos and Mulcahy, 1995:136–153; May, Kundert, Nikoloff, Welch, Garret & Brent, 1994: 298–299). Research indicates that learners with special needs who have been included in regular schools during early childhood also show gains in social behaviour, engage in fewer inappropriate behaviours, and achieve more individual learning objectives (Heckmon & Rike, 1994:30–31). In another study the findings suggest that learners with Down syndrome were as attentive and socially integrated as the other learners and acquired many skills (Rietveld, 1986:159). Marchant (1995:61–73) studied the views of pre-school educators on integrated pre-school settings and found that the conditions under which educators included learners with special needs played a role in determining their attitude. Socio-political variables created more difficulties than pedagogical factors and educators were still more learner-focused than family-centered.

Further investigations on a family-centerd approach need to be done. Support throughout the process is critical and the educator's awareness that support is available is essential (Brophy, Webb & Hancock, 1995:62).

Heckmon and Rike (1994: 30–31) suggest that successful inclusion at this level of the ecosystem is possible if the educational philosophy encompasses the whole child, adaptations are made for individual differences and common behavioural expectations encouraged for all learners. Hibbert and Sprinthall (1995:140) argue that:

> This challenge is often referred to as the need to increase the accommodative capacity of the classroom to respond to the increased range of individual differences.

Guidelines for inclusion during the Pre-school Phase, Foundation Phase and the Intermediate Phase:

- Educators need training in knowledge and fieldwork that prepares them for the challenges and the advantages associated with early childhood integration (Marchant, 1995:61–73).
- The interaction among learners, educators, and the environment in a learning programme is dynamic and educators and day-care providers need to be trained and supported to enhance the holistic development of all learners. Educators also need some knowledge and a general understanding of childhood exceptionalities, structuring of agencies and communication skills with adults to be able to provide a developmentally appropriate programme. More research is however needed to identify the adjustment needs learners may experience (Hibbert & Sprinthall, 1995:140; Heckmon & Rike, 1994:30–31; Haymes, Fowler & Cooper, 1994:184; Brophy, Webb & Hancock, 1995:53; Stoddard, Pike & Thomas, 1994:30).
- Specialists with expertise on developmental aspects should be available for consultation to assist the teacher in enriching the social and emotional development of learners (Hibbert & Sprinthall, 1995:140).
- Social interactions could be encouraged by using methods such as arranging the environment, peer modelling and imitation and prompting by the educator (Lowenthal, 1996:137; Heckmon & Rike, 1994:31).
- Naturalistic teaching procedures are recommended. These include approaches that occur in the natural environment, promote the use of

natural consequences and are brief and spaced over a period of hours or days. These approaches also meet the criteria for quality programmes for young learners with special needs as established by the Division for Early Childhood of the Council for Exceptional Children. These procedures require active engagement by the learner, promote initiative and are responsive to the learner's interests (Fox & Haxline, 1993:308–325).

- The pre-school educator has the most important influence on attitudes of learners and parents (Stoddard, Pike & Thomas, 1994:30).
- It is found that the cooperative system, where a family member (mother, father or grandparent) spends one day a month as teacher assistant, is effective for pre-school (Stoddard, Pike & Thomas, 1994:30,3131).
- The school should educate and inform parents on matters such as learning programmes, parenting skills and professional conferences, as this empowers parents and enhances teamwork between home and school (Heckmon & Rike, 1994:30–31).
- Educators should be motivated and empowered by benefits such as a simplified routine scheduling, access to early childhood materials and equipment (Marchant, 1995:73).

The Senior Phase

- Successful inclusion at this level is complex for the following reasons (Tralli *et al.*, 1996:204):
- Educators are under pressure due to vast amounts of content and the demands of excellence.
- The number of learners allocated to an educator is high, which often hinders individualization.
- Time for planning and collaboration is limited.
- Learners with special needs lack basic essential skills required in the secondary setting.
- The culture in secondary schools supports content-centerd rather than learner-centerd orientation and adaptations to needs are not a priority.
- Raising overall achievement is the ideal in secondary schools, not extreme efforts for a few learners with special needs.

As the senior phase is not applicable for this study, further guidelines for inclusion

during this phase will not be included in this review.

2.4.2.4 **Curriculum in the inclusive classroom**

If the educational psychologist becomes involved in the support of learners towards a more inclusive educational process, the psychologist would also have to play a role in evaluating the curriculum of the classroom. The Department of Education (1997) provides the following guidelines for curriculum development:

> Curriculum may be defined as everything that influences learning, from the educators and the learning programmes to the learning environment. Institutional development refers to the transformation of the whole environment that surrounds and contains the center of learning, including the physical environment, the psychological and social climate or ethos, as well as the learners, educators, parents, management personnel and all others involved in learning and development of the center.
>
> In an inclusive education and training system, the curriculum needs to be responsive to the needs of all learners. It needs to be flexible and accessible to do this. Accessibility includes providing the opportunity for all learners to gain entry into the education system (schools and other centers of learning) and to participate fully in the learning process (Department of Education, 1997:87).

These statements are emphasized by Lazarus *et al.* (1999:51) and they further note that the "'hidden' curriculum which constitutes the effect of the norms and values of the school on the learning and development process" should also be facilitated. Udvari-Solner and Thousand (1996:182) argue that standardised curriculum and curriculum delivery approaches are often uninteresting and unresponsive to diversity with the emphasis on learner differences. The inclusive process differs qualitatively from integration or mainstreaming efforts where attempts were made to "fit" the learner into the traditional, uniform classroom. Inclusion embraces a responsive and accommodating curriculum for all learners as well as a supportive community in the classroom.

UNESCO (1994:68–69) asserts that content should enable holistic development and be related to life experiences. Assessment needs to be reviewed and a continuum of support should be provided. UNESCO (1994) further notes that research is required at national and regional level to enhance capability.

Udvari-Solner and Thousand (1996:183) point out that envisioning an inclusive curriculum from a reconstuctionist perspective may be useful in the process of

transforming to a system where all learners need to be participatory members of the school community. Reconstructionism critically reflects on contemporary culture and encourages the re-invention of the future to create a more humane and democratic society that reflects the vision of inclusion. Reform should however be based on analogous theoretical foundations to ensure true reconstruction. Constructivism, the Vygotskian theory and the theory of Multiple Intelligences provide an appropriate theoretical foundation because of their relevance to inclusion. By mastering at least one of these orientations the educator has a positive opportunity to create an environment which responds to diverse needs. These three theories are discussed briefly, as the volume of this thesis prevents an in depth review:

Social Constructivist Theory

According to Udvari-Solner and Thousand (1996:183) constructivism implies that

> ...learning is the creation of meaning that occurs when an individual makes connections, associations, and linkages between new and existing knowledge... or ...learners construct their own knowledge... and ....all people are always learning and the process cannot be stopped...

The influence of social context, culturally relevant content, effective social guidance in activity and the individual's own contributions to learning are the key concepts of social constructivism. The claim that all learners can construct their own knowledge is powerful and has important implications for learners with special needs as it contradicts old paradigms and challenges definitions of learning. It also obliges one to go beyond the claims that functional impairments are directly connected to cognitive deficits. All learners are therefore able to gain from education and learning depends on the discrete social exchanges that take place within social and cultural contexts. In practice the role of the educator is consequently redefined, content and context are linked and authentic, supportive instruction, and feedback and assessment are included (Mallory & New, 1994: p. 322–334, 328; Udvari-Solner & Thousand, 1996:183; Stainback & Stainback, 1996:208).

Vygotsky (1978:57) emphasises the focus on the external world as well as the interactions within the immediate social world of the learner. Udvari-Solner and

Thousand (1996:184) point out that postulates of Vygotsky (Davydov, 1995) indicate that the educator teacher facilitates learning during education and this process of social interaction (which indicates a socio-cultural view of cognition and a zone of proximal development) contributes to the development of the learner's personality, creative potential and inner values. Collaborative instructional processes, the learner's unique abilities and the interaction between learners provide a rationale for inclusive schooling. Mallory and New (1994:334) assert that:

> Social constructivist theory entails a new interpretation of the role of the teacher as one who is capable of and responsible for learning about the children within his or her care, and utilizing this knowledge to construct practices that are developmentally appropriate for particular children in particular contexts (New, 1994).... To accept the tenets of social constructivism entails more than a radical change in our work with young children. This theoretical paradigm describes the processes by which adults, too, come to more sophisticated conceptualizations of their world. Inclusive early childhood settings can serve as crucible in which adults work together to construct new understandings of learning and development leading to more effective programs.

The Multiple intelligence theory

Traditional theories argue that the processes of the mind are quantifiable, calculated into a single construct and that learners can be compared, whereas the theory of multiple intelligences questions aptitude and intelligence tests with the assumption that there are several families of intelligence. The following seven types of intelligence have been indicated: musical intelligence, bodily-kinesthetic intelligence (abilities to use the whole body, or various portions), logical-mathematical intelligence (scientific thinking), linguistic intelligence (linguistic skills), spatial intelligence (spatial problem-solving ability), interpersonal intelligence (core capacitiy to notice distinctions among others)... and intrapersonal intelligence (knowledge of the internal aspect of a person) (Walters & Gardner, 1986:167–173). This theory also necessitates a critical evaluation of the current classification systems used to identify disabilities (Goldman & Gardner, 1989; Gardner, 1985; Udvari-Solner & Thousand, 1996). According to Walters and Gardner (1986:166) multiple intelligence theory focuses on the 'biological origins of each mental faculty. Even so, the biological proclivity to participate in a particular form of mental activity must be coupled with the cultural manipulation or embodiment of that activity. As a neurally based computational system, each intelligence is activated or 'triggered' by certain kinds of internally or externally presented information" (Walters & Gardner, 1986:166).

Walters and Gardner (1986:174,175) further note that these multiple human faculties seem to be independent of each another, which contrasts with the traditional belief that abilities function horizontally. This implies for instance that there are various faculties for memory, such as memory for music, spatial events, language, etc. The authors also note that cultural roles seem to draw on a combination of intelligences, with the possibility of the total being greater than the sum of the parts, which could enable an individual to fulfil a particular role adequately although not be particularly gifted in a specific intelligence. Walters and Gardner (1986:181,182) further note that:

> The theory of MI faces two directions: toward the world of educational psychology and toward the world of everyday experience. To educational psychology, it presents a theoretical analysis of various sources of data with the aim of explaining the variety of human accomplishments. To the world of everyday experience, it provides a framework whereby practitioners, teachers, and parents may better cope with the mélange of individual differences.

Translating theory into practice for an inclusive curriculum

The assumptions of the abovementioned theories together with the fact that democratic communities need constant attention as well as skills to understand the social self, emphasise the importance of 'learner-centered, process-oriented, and communication-based educational methods' in the process of creating a curriculum for all learners. These methods should however be 'translated, applied and made explicit in the following three areas: 'classroom design, curricular approaches, and instructional practices' (Udvari-Solner & Thousand, 1996:185; Purpel, 1989:127).

A. Learning environment and classroom design	**Multi-age grouping**
B. Learning programmes and curricular approaches	**Multicultural teaching** **Interdisciplinary curriculum** **Social responsibility and peacemaking** **Learning programmes** **Life orientation** **Transition to work** **Medium of teaching and learning**
C. Instructional practices **(Adapted from Udvari-Solner & Thousand, 1996:185)**	**Classroom management** **Teaching practices** **Peer-mediated instruction** **Technology** **Community-referenced instruction** **Teaching and learning material** **Assessment**

The scheme in Figure 8 connects the three educational theories that support inclusion with eight elements of classroom design, curriculum and instruction, which represent the core of developing a responsive curriculum. Neither the theories nor the educational practices should be associated with either special or general education but be viewed as relevant for all learners. The eight elements proposed by Udvari-Solner and Thousand (1996:186) as central to the development of a responsive curriculum are multi-age grouping, multicultural education, interdisciplinary curriculum/thematic curriculum, social responsibility and peace-making, peer-mediated instruction, technology, community-referenced instruction and authentic assessment. The proposed scheme has been adapted to the South African context by adding the following elements and concepts: learning environment, learning programme, culture of learning, teaching and service, the holistic development of centers of learning, basic provision in centers of learning, barrier-free access, health-promoting centers, outcomes-based education, life orientation, transition to work, medium of teaching and learning, classroom management, time-tabling, materials and equipment (Department of Education, 1997). The elements, learning environment and classroom design, learning programmes, curricular approaches and instructional practices, as seen in Figure 8, are discussed below. I view these elements as essential for the knowledge base of the educational psychologist in support of learners towards more a more inclusive educational process.

A. The Learning Environment and Classroom Design (Figure 8)

The Learning environment

The Department of Education (1997) claims the following:

> It has become extremely clear to members of the NCSNET/NCESS through the process of site visits and stakeholder submissions, that the vast majority of centers of learning remain physically inaccessible to many learners – most specifically for learners with physical disabilities. In this way, a large number of learners are excluded from these centers and prevented from engaging in the learning process (Department of Education, 1997:37).

> A health-promoting center of learning may be identified as: "...A place where all members of the learning center community work together to provide learners with integrated and positive experience and structures which promote and protect their well-being. This includes both the formal and informal curricula in health (including physical, social and emotional health), the development of health-promoting policies, the creation of a safe and healthy environment, the provision of appropriate support services, and the involvement of the family and wider community in efforts to

> promote well-being. A health-promoting center of learning is a center that is constantly strengthening its own capacity as a healthy setting for living, learning and working..." (Adapted form WHO, 1996) (Department of Education, 1997:92).

A holistic approach implies creating an environment conducive for all learners concerning the physical and psycho-social environment and would include the vision, structure and support provided for the development of all stakeholders. These variables are interrelated and interdependent and barriers to learning need to be addressed in the process. The lack of basic provision in South Africa causes this vision to be a tremendous challenge especially for those learners who have special needs. The "health-promoting school" approach which is being developed in South Africa is supported on a national and in part provincial level, and reveals the value of 'whole school' development by bringing together various sectors. The committee proposal includes promoting equity, health promotion, mobilisation of resources, training of educators to render support to learners in health-related matters, co-operation with the community and the development of international support (Department of Education, 1997:89-93).

To create an environment where everybody learns, one needs to create an environment where everybody feels part of the partnership. The process should not be rushed and outcomes should be developed by the community, not mandated by the government. Outcomes need to be defined clearly and sensibly and there should be a relationship between subject matter, desired outcomes and real life (Brandt, 1994:24–28; Killen, 1996:10; Malan, 1997:35.

Classroom design

According to Udvari-Solner and Thousand (1996:186) **multi-age grouping** (also called vertical grouping) could be considered, where importance is given to heterogeneity in gender, ability, ethnicity, interests and age levels. Growth of the learner is approached from biological and psychological time instead of physical time only. The classroom organization becomes flexible and responsive to different levels of maturity and ability (Udvari-Solner & Thousand, 1996). In respect of this, Hines and Howard (1996:7) note that some needs of learners exceed the reasonable demands placed on mainstream education, resulting in learner frustration. Success can however be ensured by adhering to the following important principles:

- Provide support to the educators.
- Select educators who are open to the idea of inclusion/change.
- Explore educator attitudes, styles and beliefs before placing a learner, as this minimizes disruption.
- Pair regular and special education educators who share philosophies and are able to collaborate.

B. Learning programmes and Curricular Approaches (Figure 8)

Multicultural Education

There are various definitions of multicultural education, but the predominant themes of all the main views claim that multicultural education includes a multidisciplinary learning environment which is responsive to the academic, social and linguistic needs of learners, and enhances understanding of the learners' own as well as other members of society's background (Salend,1994:47–48). Udvari-Solner and Thousand (1996:186) link multicultural education with language and inclusive education, instead of viewing them as separate reform movements.

With respect to the above, Lynch (1992:39) asserts that the aim is to educate for global citizenship and this includes the development of active participatory citizenship and following a whole-school approach. Lynch (1992:34,35) also notes that education for citizenship therefore addresses:

> cognitive, affective and conative goals for the reconstruction of social relations at local, national and international levels...At the core, its ethic is respect for all persons and their human rights: a realization that human rights are indivisible.

An interdisciplinary or thematic curriculum

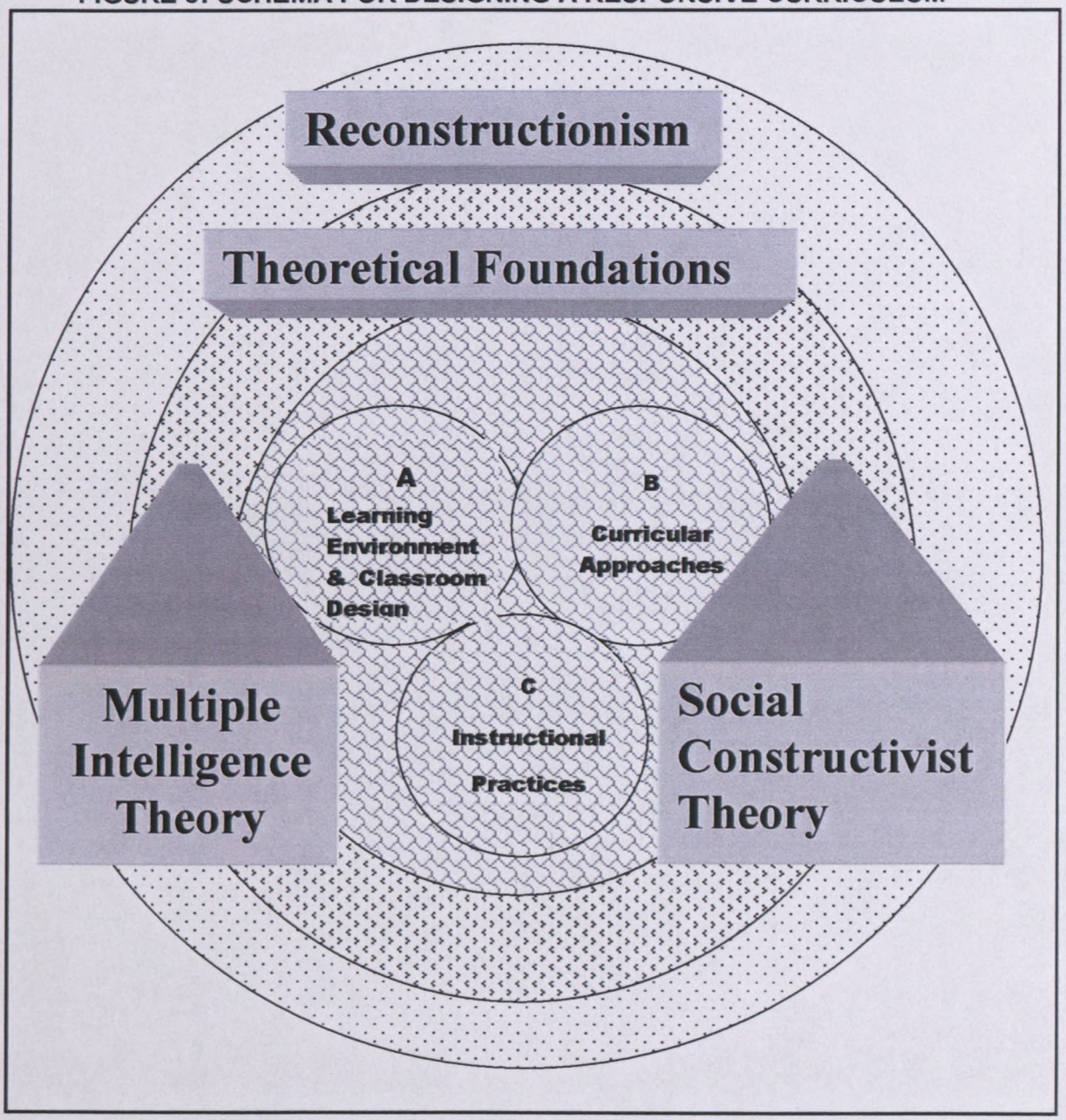
An interdisciplinary or thematic curriculum may be implemented in various ways and is applied by uniting educators of different disciplines in team teaching where the theme is infused across the learner's instructional day (Udvari-Solner & Thousand, 1996:186).

Teaching social responsibility and peacemaking

Teaching social responsibility and peacemaking is essential as the most challenging learners seem to be those exhibiting a high rate of rule-violating behaviour. Social circumstances in the microsystem may harm the learners' level of motivation. However conflict is part of life, but "if-then" rules or consequences

are rejected. Contextual responses to behaviour are adopted and learners receive roles as "peacemakers" through which they take responsibility for conflict. The "peacemakers" or "conflict managers" make themselves available for mediation (for which they are trained) (Grant & Sleeter, 1989; Udvari-Solner & Thousand, 1996:186–188).

FIGURE 8: SCHEMA FOR DESIGNING A RESPONSIVE CURRICULUM



Learning programmes

Although outcomes-based education has been introduced in chapter one, some aspects thereof will be highlighted in the context of learning programmes.

> Curriculum development, it is intended, will be free from prescription, allowing for centers of learning to address specific needs or interests of their learners and community. The philosophy of OBE provides for an environment in which diversity can flourish, where understanding of and sensitivity to difference in terms of race, language, religious beliefs and appearance can be developed. Forms of delivery also incorporate community resources to ensure greater participation and ownership (Department of Education, 1997:95).

Killen (1996:6–12) notes that a variety of methods of instruction should be used and there should be opportunities for practice. Educators should facilitate personal closure of each lesson. Outcomes-based programming ensures that the educator is well prepared and purposeful and learners are allowed to discover and follow their interests. Demamiel (1993:5) argues that through outcomes, the educator eventually has an accountable document enabling more efficient reporting. Educators are encouraged to acknowledge the needs and abilities of learners with the expectation that learners need not 'cover the curriculum, but discover it'. Educators across the curriculum will also make teaching more flexible and integrated and values also form part of the curriculum (Malan, 1997:35; Zitterkopf, 1994:78). McGhan (1994:70–72) warns that scheduling will propose a challenge to schools due to varying starting and ending times of learners, a greater deal of cross-age problems may develop due to learners having more time to achieve their outcomes, and the demands on parents and resources may also increase. McGhan (1994) further argues that this can succeed if the convictions that all learners can reach a common set of outcomes if allowed sufficient time and support, is followed.

Current educational reform emphasises the need for all educators to address life-skills education, and the skill of fostering an attitude of change towards learners experiencing barriers in learning also forms part of life-skills training. Mediation is needed by trained personnel, for which expertise from outside may be used, but eventually teachers should be trained to fulfil this role (Department of Education, 1997:97,98; Van der Merwe,1997:1, 10; Stainback *et al.*, 1996:215,217).

Concerning life skills, the Department of Education (1998:96) elaborates in the following way:

> The World Health Organisation's definition of life skills includes abilities for adaptive, passive behaviour that enables us to deal effectively with the challenges and demands of everyday life. This encompasses: decision-making, problem-solving, creative thinking, critical thinking, effective communication, interpersonal relationship skills, self-awareness, ability to empathise, coping with emotions, coping with stresses, skills of developing self, adapting to unchangeable circumstances, skills of respecting and relating to others as well as to the environment, and skills of learning.

The literature further indicates that life-skills training should be infused across the curriculum and enlighten the relationship between academic activities, everyday activities, future employment and other adult situations. Many of these skills are also learned incidentally through interaction with peers or in natural environments. Parents should understand the skills and co-operate, especially in entrepreneurship training and vocational guidance (Van der Merwe, 1997:5–12; Stainback *et al.*, 1996:215, 217).

The process of transition to work forms part of life-skills orientation. The Department of Education notes the following in this regard:

> The education system in South Africa has often been criticised for its weakness in preparing learners for life and the world of work. This challenge has to be addressed within the curriculum, to ensure that what is taught is relevant to life and the world of work. The new curriculum has as one of its aims to equip all learners with knowledge, competencies, and orientations needed to be successful after completing their studies (Department of Education, 1998:98).

As stated by the Department of Education (1997:98), the business community should become more involved in curriculum development and a link should be created between work and education. Programmes facilitating transition to work roles should be developed for all learners. This is even more essential for learners who experience barriers to learning. It is essential that the transition into society and equality of opportunities for learners experiencing barriers be monitored at various levels of the ecosystem (Department of Education, 1997:98).

Medium of teaching and learning

Bearne (1996:124) argues that:

> Children's intellectual, social and emotional development, their self-esteem, self-confidence and cultural and linguistic identity, are in extricable bound up with elements in their language repertoire, and their community and home languages merit support and development in their own right.

Difficulties do exist in the inherited language-in-education policy in South Africa, but multilingualism is currently being addressed in the Constitution of South Africa (Department of Education, 1997:38; Department of Education, 1998:98).

Deaf learners in South Africa are taught in South African Sign Language (SASL) as a first language and after this has been mastered, a second language is taught. Regular-education educators are mostly not equipped to teach through Sign Language. Some teachers know Signed Exact English, but this is not Sign Language. Learning is accessed through language and therefore the Deaf community demands that Sign Language should be recognised as a subject and first-medium. Sign Language could become a second language for other learners as part of a multilingual country. Braille as a means towards literacy for the Blind also benefits learners with low vision and serves a means to access the curriculum. Augmentative and alternative strategies (AAC) are strategies for learners with limited functional speech and provide opportunities for social participation and curriculum access (Department of Education, 1997:100–102).

Differentiation should be viewed as relevant for all learners, but a too simplistic view of differentiation can be exclusive (Bearne, 1996:119, 125; Hiebert, 1991:111).

C. Instructional Practices (Figure 8)

Malan (1997:36) does not view an instructional programme as a syllabus (or learning programme) or lesson plan, but as:

> ...every teacher's personal plan of action, his/her plan for ensuring that the work set out in the syllabus/general learning programme will be adequately covered by the end of the year, in a way that will meet the needs of the particular group of learners at whom it is directed.

In the instructional programme there will be reference to the syllabus (or learning programme) but it will focus on how and not so much on what is learnt. Educators have the responsibility of the design, implementation and monitoring of their own instructional programmes (Malan, 1997:36,37). The following issues are included in the review of instructional practices: classroom practices, teaching practices, peer-mediated instruction, technology, teaching and learning material, and assessment.

A variety of teaching approaches and the quality of school-level planning are essential to meet the needs of all learners, which results in the need for re-evaluation of comfortable teaching practices. The "one-size-fits-all " approach is unacceptable, especially in the view of current theories such as the theory of multiple intelligences (Schaefer & Buswell, 1996:60,61; Clark *et al.*, 1996:69).

Classroom management

Murdick and Petch-Hogan (1996:173) argue as follows:

> As the concept of inclusion is expanded in the schools, educators are questioning whether learning can occur unless effective classroom management procedures are identified and used (Smith & Rivera, 1993). True management includes all facets of the school environment, not just the control of students' inappropriate behaviours.

In fact, according to Iverson (1996:312) every action of the educator in the classroom 'constitutes a management action' and therefore careful planning is essential to create an environment conducive to learning. Effective management is especially essential for an education that responds to diverse needs, such as is present in South Africa, and the Department of Education (1997:103–104) has made recommendations towards management in the future:

> There are a variety of teaching and learning strategies that can utilise diversity as a strength. This includes: large group instruction; teacher-directed small group instruction; small group learning; one-to-one teacher-learner instruction; independent seatwork; partner learning; and co-operative learning groups. Teacher-directed groups and small group learning allow for more opportunities for contact between teacher-and-learning, and learner-learner (Department of Education, 1997:103).

The requirements of Curriculum 2005 demand more sophisticated management strategies for South African classrooms. Educators need to reflect critically on their professional practice, pursue meanings and reach new sense in their instructional and classroom management (Van der Horst & McDonald, 1997:89). It is also argued that classroom management and learning outcomes are closely connected and that efficient managers understand the theory of management and learners' needs. They are also able to create work-oriented and learning-oriented spaces for learning and respect learning and learners (Van der Horst & McDonald, 1997:86–110, Iverson, 1996:298; Jones, 1990).

Murdick and Petch-Hogan (1996:172,173) note that to reach effective management requires diligence and a pro-active approach which includes "pre-

intervention management" to prevent problems. Pre-intervention strategies or "alternative intervention strategies" are defined as "attempts to remedy the identified educational concerns prior to the evaluation of a student for a special education placement".

An understanding of the concepts "complements" and "compromises" as explained in Table 3, will also enhance overall classroom management. King-Sears and Cummings (1996:236) summarises:

> How does one start realizing complements and determining compromises? People must start with themselves and acknowledge the need to be a part of the collective development and implementation of inclusion...

TABLE 3: COMPLEMENTS AND COMPROMISES

Complements	Compromises
"**Complements** are the additions to a teacher's repertoires that accomplish inclusive goals and that satisfy the teacher's needs to accomplish individual content or curriculum goals or priorities " (King-Sears & Cummings, 1996:232).	"**Compromises** are agreements or understandings that educators reach with their colleagues (including all school staff and, sometimes, the students) in order to accomplish these priorities or goals" (King-Sears & Cummings, 1996:232).
• Specialized services are based on a need and not on a label, but other learners can also benefit from new strategies. • Planning and instruction are shared. • A trans-disciplinary approach is preferred above multi-disciplinary / interdisciplinary approaches. • More than one person is involved in reinforcing and reiterating learner outcomes and the learner generalises. • Instructions emphasise real-life situations (King-Sears & Cummings, 1996:233).	• Inclusion is a gradual process requiring a shared vision, plan, training and support. • Decisions on inclusive funding need to be made on an individual basis. • Learners are accommodated at their level and all educators will be obliged to accept the challenge. • Inclusion implies heterogeneous instructions and different learning outcomes. • Inclusion can be evaluated on assessing if all groups of learners have reached their desired outcome (King-Sears & Cummings, 1996:234–235).

Teaching practices

- Strategies for adapting classroom curriculum include using flexible outcomes and taking individual abilities into account to prevent apathy towards learning content. Multi-level instruction (as identified from the work of Schulz and Turbull (1984) and developed by Collicot and Stone (Campbell, Campbell, Collicott, Perner & Stone, 1988) is recommended for this purpose (Stainback *et al.*, 1996:210,213).
- Educators and learners need to be empowered with instructional choices in the

classroom through a continuum of methods including 'explicit' instructional approaches as a more inclusive alternative (Mercer, Lane, Jordan, Allsop & Eisele, 1996:226). Explicit teaching is described as instruction where knowledge is provided by the educator, and the learner should master the skill or concept. Opportunities for application are provided. This method makes provision for insufficient prior knowledge, barriers in learning, as well as opportunities for the mastery of basic concepts, problem-solving and higher-order thinking. Behavioural therapy, direct instruction and exogenous constructivism are examples of explicit teaching. Implicit teaching implies instruction where the learner discovers new knowledge and gains understanding while the educator serves as facilitator and provides support. Thought processes are emphasised and this method is used when learners have prior knowledge. These two methods are viewed as compatible (Mercer *et al.,* 1996:227).

Figure 9 indicates that gifted learners, learners with experience and learners who are proficient with lesson content perform well with **implicitly** anchored instructional content. Low-performing learners or learners who are at risk have special needs or limited experience with content and are most successful with **explicit** instruction. Average learners benefit from a variety of methods that address needs (Mercer *et al.,* 1996:230).

Mercer *et al.* (1996:227) identifies three different kinds of constructivism, which include: **exogenous** (an external or environmental source of knowledge is assumed), **endogenous** (an internal source of knowledge is maintained and may reflect development rather than learning), and **dialectical** (based on a conception of interactions between the individual and the environment as the source of learning).

Peer-mediated instruction

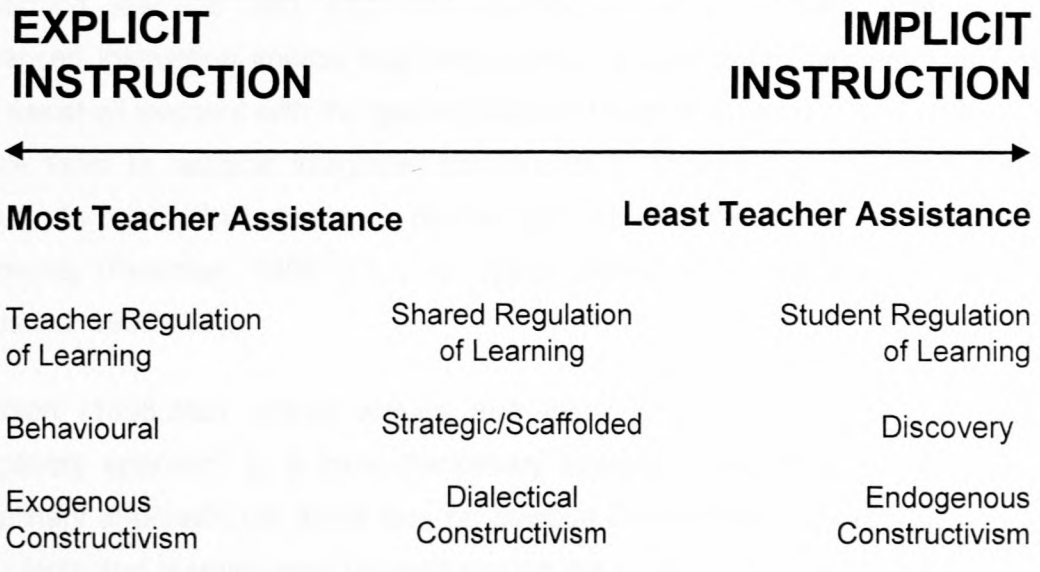
Udvari-Solner and Thousand (1996:188) suggest peer-mediated instruction or partner learning, which implies that the same or cross-age learners teach each other in a single classroom or across classes. In the process, the tutors also come to a better understanding of the work. Good and Brophy (1987) also suggest that another advantage of peer-mediation is that age-appropriate language, and examples are used and the learners are familiar with each other's frustrations.

Within the concept of **cooperative group learning,** conditions are created for groups to develop healthy relationships and become productive (Udvari-Solner & Thousand, 1996:188).

Technology

The use of technology and equipment in education includes all devices such as computers, software, calculators, telecommunication networks, interactive multimedia and many more, which reinforces '..the use of other process-centerd and communication-based instructional and curriculum approaches' (Udvari-Solner & Thousand, 1996:189). Brett (1995:8–11) notes that numerous studies haves shown that technology in the pre-school also enhances social and cognitive skills by providing developmentally appropriate experiences for very young learners.

FIGURE 9: A CONTINUUM OF EXPLICIT AND IMPLICIT INSTRUCTIONAL APPROACHES



A continuum of explicit and implicit instructional approaches expresses a range in the amount of teacher assistance provided, level of student responsibility for learning expected, and ideological orientation of instructional practices.

(Mercer *et al.*, 1996:230)

The Department of Education (1997) notes:

> The provision and maintenance of assistive devices within learning contexts has varied considerably in the past. Race has been a major determining factor, with distorted provision among the racially segregated Department of Educations. The provision of assistive devices has also been characterised by prohibitive costs, lack of knowledge regarding services and facilities which are available, centralised service delivery and the absence of an integrated strategy for the provision of effective devices and skills (Department of Education, 1997:37).

The Integrated National Disability Strategy emphasises the need for access to affordable services although accompanying human skills should also be developed. The Department of Health has developed national norms and standards to remove the backlog of fifty years but further research is required in the role of technology towards curriculum access (Department of Education, 1997:106).

Community-referenced instruction

Teachers may not be able to teach all essential skills in the classroom, especially concerning learners with significant barriers to their learning. Community-referenced instruction implies that instruction in actual community environments may assist all learners with the generalisation of skills from school to real life and enable them to become integrated participants in organisations at school level already. In totality this creates a partnership between the school and the local community (Peterson, 1996:271, 274; Sapon-Shevin, 1996:274; Udvari-Solner & Thousand, 1996:189).

Peterson (1996:289) further argues that there is a transition from a multi-disciplinary approach to a trans-disciplinary approach (real-world). In the multi-disciplinary approach the focus was on obvious connections between disciplines or subjects and learning was focused around the question of what constitutes the important issues within each discipline. In an interdisciplinary skills approach "the emphasis shifts to commonalities across the disciplines, most often with an emphasis on critical thinking skills". The trans-disciplinary/real-world approach "organizes learning around the question, How can we teach students to be productive citizens in the future?" (Peterson, 1996:289).

Teaching and learning material

The Department of Education (1997:104) prescribes that teaching and learning

material should be evaluated and modified to serve all the diverse needs. This requires national and provincial structures to prevent bias and provide specialised material for intense needs either in separate institutions or within the existing curriculum

Assessment

Hoy and Gregg (1994:4) state that assessment may be viewed as an ongoing process that continuosly adds new information about the variation within a student's profile of learning. This new information is necessary to enable modification of teaching strategies. The purpose of assessment varies. Assessment of learners with special needs could be done for the purpose of placement, instruction or communication of information to learners (Hoy & Gregg, 1994:5–9). Various forms of assessment are shown in Table 4 (Malan, 1997:25; Van der Horst & McDonald, 1997:168, Udvari-Solner & Thousand, 1996:190; Choate & Evans, 1992; Diez & Moon, 1992; Hoy & Gregg, 1994:37; Calfee & Perfumo, 1996:242).

TABLE 4: VARIOUS FORMS OF ASSESSMENT	
Continuous Assessment	During class work learners reflect on their work or teachers make observations to monitor progress and identify problems.
Commercially produced tests	Many commercially produced screening or diagnostic tests are available for group and individual assessment.
Teacher developed measures	Measures developed by the teacher in the classroom.
Objective tests	These tests allow little qualitative judgment.
Subjective tests	Qualitative judgement is required in subjective tests.
Static procedures	Most commonly used during assessment. *"They help capture what the student knows under given conditions"* (Hoy & Gregg, 1994:57).
Dynamic procedures	These procedures identify *"emerging knowledge and provide insight into the student's thinking processes"*(Hoy & Gregg, 1994:57).
Summative Assessment	Done at completion of a task or a course and includes exercises, assignments and examinations.
Formative Assessment	This indicates a reason for assessing with the purpose of giving feedback to learners or educators.
Norm-referenced assessment	This refers to the purpose of assessment which could be to determine level of performance compared to the age norm, gender differences or differences between test papers. Class averages are regularly calculated and departmental requirements indicate a norm for pass rate. Published assessment tools are norm-referenced as they *"compare the individual to others who have similar characteristics"* (Hoy & Gregg, 1994:56).

TABLE 4: VARIOUS FORMS OF ASSESSMENT	
Cognitive assessment	This data determines if a learner *"knows specific information"* (Hoy & Gregg, 1994:55).
Criterion-referenced assessment.	The norm to be obtained is the demonstration of an ability or competence and the criteria are the description of the abilities: learner performance is measured against the criteria and mastery of the skills is examined.
Performance assessment	This measure determines specific skills: *"Performance assessment is the name given to direct and systematic observation of actual learner performance (demonstrations of competence), or to evaluations of completed products (models, assignments, essays, etc.)"* (Malan.1997:30).
Interviews	Interviews by regular class teachers with learners and parents constitute a direct and formal diagnostic technique of gathering data for assessment.
Observations	Through preliminary observations data gathered during interviews may be verified and problems defined. Through follow-up observations discrete and non-discrete behaviours may be observed.
Work samples	Work samples, also named outcome recording is a method where work samples are collected systematically in the areas where the learner has the most difficulty and the work is then examined and the data (with possible error patterns) is then noted.
Self-assessment	Through this process learners assess themselves.
Portfolio assessment	Portfolio assessment includes an expansion of the work folder concept, which becomes a *"Systematic source of planning and communication"* with the learner and parents. It is developed *"systematically by collecting assignments over predetermined intervals"* (Hoy & Gregg, 1994:39).
Authentic assessment	Authentic assessment encourages learners to perform, produce and demonstrate skills which represent realistic learning demands in the context of real-life settings. Skills are integrated and applied, the process and product of learning is emphasized and the learner's judgement of personal performance is included. Direction for future instruction is provided and cultural bias as well as discrimination can be prevented. Authentic assessment approaches support classroom instruction, reflect local values, standards and controls, collects evidence from multiple activities and promote learning and teaching among the educators. The following approaches can be categorised as authentic assessment approaches: observation-based assessments, portfolio assessments, performance tasks and self-assessment.
Continuous center-based assessment	Continuous center-based assessment reflects the international and national purpose of assessment namely evaluation of effective teaching and learning (Department of Education, 1997:108).

Group tests are routinely used to assess more general achievement, and individual tests allow more precise observations. Although not routinely used in the classroom, screening may be used for initial identification of learners experiencing difficulties, where after more precise diagnostic tests may be done. The choice between cognitive or performance data will be determined by the requirement of knowledge of information or skills that need to be demonstrated. Norm-referenced

data assist in making comparisons, but criterion-referenced data are selected when mastery of skills, based on the curriculum, need to be demonstrated. Objective tests score with ease, but the learners' thought processes, application, critical evaluation and problem-solving skills are not observed. These skills can be observed through subjective data. Static procedures do not indicate why a learner gave the wrong answer, whereas dynamic procedures allow structured dialogue between the educator and the learner, as the educator is enabled to provide a cue or ask the learner to explain his thought processes (Hoy & Gregg, 1994:54–58).

There are many standardised tests available for group or individual assessment and these data are usually viewed as essential for "diagnosis of disabilities and eligibility for special education" (Hoy, 1994:56). These tests are administered with reasonable ease, but not all the content the learner has been taught may be measured. Measures developed by the educator to generate more qualitative data may serve this purpose provided the educator is well trained in this process to ensure clarity and good quality of the data. Many conventional tests are also based on a Thurstonian rationale, implying that tests mostly measure "skills which are required in a given society" instead of fundamental human cognitive characteristics. In a multi-cultural society, with unevenly distributed learning and development, people have had varying opportunities to acquire certain skills and selection procedures based on these skills would be unfair. Tests seldom measure true competencies that are required in a work situation and statistic measures are the result of a test instead of assessing the dynamics of learning(Taylor,1997:1-2).

A learning-potential test would address these shortcomings. Standardised tests administered to diverse groups of learners can only be justified if none of the learners are disadvantaged and the result promoted understanding of the learners. (Department of Education, 1997:111). Intelligence tests are also predominantly deficit focused instead of giving information on the strengths of the learner (Engelbrecht, 1997:7).

The Department of Education (1997) confirms the above claims:

> Many of the characteristics of past assessment policy and practice in South Africa arose from the focus of assessment on classification for placement purposes. From the earliest attempts to provide specialised education to learners with 'special needs' there has been a close linkage between assessment and placement (Department of Education, 1997:107).

The historical tendency to classify learners for school placement has influenced all assessment in South Africa. The new paradigm obliges a review of assessment procedures and will have intense implications for the role psychologists play (Department of Education, 1997:112).

> Any assumption that education support personnel will in future be able to continue a primary focus on individual assessments of learners experiencing barriers to learning and development is unrealistic. Rather than perpetuating an expectation that assessment of barriers to learning and development is a referral-driven process that is the responsibility of education support personnel, assessment needs to be reconceptualised as a center-of-learning-based team process in which school-based educators play a central role. This view does not ignore the need for assessment by specialist education support personnel in cases where educators do not have the necessary expertise. It simply recognises that it will be members of the CLBT and not itinerant education support personnel who will be most accessible for providing assistance to these learners. In this process education support personnel will be freed to focus on other roles and functions, which have become part of the new inclusive paradigm.
>
> Reducing traditional involvement in time-consuming 'testing' or specialist assessment functions will free education support personnel in general, and psychologists employed by Department of Educations in particular, to use their expertise to address other needs, such as those relating to social and emotional issues, in ways which will potentially impact positively on the learning experiences of many more learners. This will include a focus on service delivery to educators, parents and other caregivers and the development of preventative and developmental programmes (Department of Education, 1997:108).

Clawson and Noll (1994:58) relate to the issue of assessment in the following manner:

> The term "peripheral intervention" could be applied. This concept refers to a set of procedures for "problem solving, consulting, and selecting instructional strategies ultimately intended to avoid unnecessarily costly evaluations and eliminate inappropriate referrals to special education.

According to O'Neil (1994:9) summative assessment, formative assessment and norm-referenced assessment are consequently described as traditional forms of assessment and often fail to measure "applications of knowledge". Malan (1997:25–29) argues that criterion-referenced assessment, and performance assessment are viewed as alternate ways of assessment, preferred due to the criticism towards traditional forms of assessment.

Assessment in outcomes-based education

Assessment is critical in outcomes-based education, as learners need to demonstrate their knowledge or competence (O'Neil, 1994:9). In this regard Malan

(1997:31) notes that:

> To ensure fair and equitable judgements, assessors in an outcomes-based system of education will have to identify, formulate and make known the criteria which they intend using during the assessment process. This means that criteria should be spelt out simply, clearly and understandably and should be known to all the candidates and assessors before assessment takes place.

The identification of needs and barriers to learning are also emphasised in Curriculum 2005 and described as a continuous process (Department of Education, 1997:108). Outcomes-based assessment is associated with authentic assessment and higher-order thinking is involved, as well as problem solving. It makes effective use of teacher judgment and learners have the opportunity to explain their work and assess themselves. Assessment is a complex process and a society with a diversity of views will also have contradicting views on assessment (Bearne, 1996:197; Frowe, 1996:195–215; Killen, 1994:8; Malan, 1997:30,31; Marzano, 1994:1,44; Van der Horst & Mc Donald, 1997:169–208; Campbell, Edgar & Halsted, 1994:160; Haack, 1994:54).

Educator support

Educators might not feel comfortable with their role in assessment, but support and ongoing training is viewed as a priority. Education support personnel will need to support educators as part of their role description (Department of Education, 1997:109).

Early identification, assessment and intervention

The literature that I reviewed confirms the benefits of early identification and intervention and current facilities such as the community-based clinics are in an appropriate position for early identification and assessment. The community could develop early intervention strategies and links between community-based agencies and service providers in the formal sector should be formed to create continuity at all developmental stages (Department of Education, 1997:107).

Systems assessment

Transformation to inclusive schools implies major system changes, which challenge various levels of leadership and management as they are obliged to initiate the change at multiple levels of the ecosystem and simultaneously maintain stability (Sage, 1996:105–107).

> An inclusive system of education is based on a philosophy which accepts that centers of learning will attempt to accommodate the needs of all learners. Within this philosophy is an understanding that many of the barriers learners experience in accessing the curriculum are system-related rather that learner-related. System assessment therefore becomes an integral part of a broader assessment process.
>
> System assessment aims to explore the extent to which the system (e.g. the center of learning and other aspects of the curriculum) is able to accommodate diversity in the learner population and to address barriers to learning and development. It is about the ability of educators to meet individual learner needs, and also about the transformation of the system as a whole to meet the needs of all learners. System analysis would include an evaluation of the ethos of a school, its management systems, its educator-development strategies, the attitudes of its staff, parent involvement, networking with service providers, teaching practices, and so on. System assessment rely on the participation by all stakeholders who bring different perspectives to the process of identifying barriers to learning and developing enabling interventions (Department of Education, 1997:110).

When is assessment effective?

Descriptive assessment procedures contribute to preliminary information on the naturally occurring events associated with behaviour (Wacker *et al.*, 1996:329,330). By articulating standards and designing assessment, educators collaborate and build their capacity to use assessment for improving instruction. Alternate assessment begins a new complex process and educators will have to judge the soundness of their measures and the "soundness of their claims" (Jamentz,1994:56; Baker, 1994:59).

It is important to establish in whose interest the assessment is done and what the expectations are for the assessment. The educational psychologist may assess for the purposes of classification, diagnosis, support, evaluation and empowerment. Once the educational psychologist adopts a broader approach to assessment, there is a movement towards empowerment and human rights. Assessment needs to be viewed as a dynamic process as this approach emphasises modifiability and change with an optimistic view of human functioning (Burden,1996b:98–103; Kriegler,1996:118).

Concluding Remarks on Curriculum Development

The strategy and practical implications envisaged for South Africa by the Department of Education (1997:77) follows the recommendations of the Salamanca Statement (UNESCO, 1994). The framework for the future is seen as follows:

> The education system must provide a flexible curriculum which is able to respond to differences among learners and ensure that all learners engage effectively in the learning process. A flexible curriculum includes flexible teaching approaches, the use of appropriate technology, assistive devices, and other mechanisms to facilitate access to all learners. Curriculum 2005 is already addressing some of these aspects at school level, but this needs to be expanded to all levels of education (Department of Education, 1997:75).

In the previous paradigm a learner failed the school year when he/she was unable to master the curriculum, and was often excluded from general education. With the more holistic, constructivist perspective on learning the following principles are embraced: The learner is recognised as the center of learning and a facilitating process which builds on the strengths of the learner is acknowledged. The emphasis on deficits and weakness is reduced. Content should be meaningful to learners and the needs of learners to be able to work and live in a community must be considered. The emphasis is on real life and the teacher is a facilitator. The emphasis on isolated skills in isolated settings has changed to engaging students in real-life projects, combined with interaction with each other (Stainback & Stainback, 1996:206–207).

2.4.2.5 **School culture**

Schaefer and Buswell (1996:59,60) note that the ability to respond to learners with spontaneity and flexibility should urgently be developed. The educator must have the courage to take risks and assume a problem-solving approach. This attitude is essential as schools are microcosms of society and need to assume responsibility in improving society by modelling respect. This can be achieved by organising public schools into smaller units: mini-schools and charter-groups of learners and educators who remain together for several years (Wang *et al.*, 1994:15; Schaefer & Buswell, 1996:52,53; Sebba & Ainscow, 1996:11). Lazarus *et al.* (1999:48) elaborates by noting that that the psycho-social environment which includes the role and the attitude of the teacher could enhance learning development or create barriers. The government supports this notion as Williams (2000:4) states that it is one of the goals of the Ministry to "build an ethos in educational institutions, provincial, regional and district departments of education, and in communities that place an emphasis on human rights in education..."

De Jong (2000:351) includes the following elements as part of a school culture: a culture of learning, teaching services, curriculum development, democracy, order

and discipline, supportive culture, tolerance and inclusion, and learning organisation culture which manages change. De Jong (2000:351) further asserts that educational psychologists should play a more active role in developing a "supportive psycho-social learning environment". This could include developing positive relationships within the school. International literature supports this notion where Nastasi, Berstein, Varjas and Pluymert (1998:218) hold that educational psychologists, as mental health specialists, can assume key roles in the development, implementation and evaluation of school-based mental health programs... although schools have attempted to address the mental health needs of children and adolescents through programming and teacher training, the involvement of school psychologists in these efforts is not well-documented.

2.4.3 COMMUNITY PERSPECTIVES

According to UNESCO (1994:75):

> Realising the goal of successful education of learners with special educational needs is not the task of the Ministries of Education and schools alone. It requires the co-operation of families, and the mobilization of the community and voluntary organisations, as well as the support of the public-at-large. Experience from countries or areas that have witnessed progress in equalising educational opportunities for learners and youth with special educational needs suggests several useful lessons.

Williams's (2000:5) claim on a community-based approach to support is in line with UNESCO's (1994) statement where they assert that national policy is moving towards building "support structures within schools and communities rather than rely[ing] on the limited number of available professionals or 'experts' in the field. The Ministry strives towards accessing all resources in the community, including individuals from primary health-care (Williams, 2000:6).

Individuals from as many levels of the ecosystem as possible need to participate and be mobilised to ensure community involvement. The community should be involved with supplementing school activities and support with homework and family matters. Neighbourhood associations, youth clubs, availability of premises, involvement of elderly and other volunteers (including persons with disabilities) should be considered. If action is initiated from outside the community, the community should become empowered partners in the programmes and the government should provide financial support (UNESCO, 1994:76).

O'Brien and O'Brien (1996:33–34) assert that the community facilitates transformation and the development of a collective "we" identity. As tension often exists in diverse communities, the development of a sense of community requires a conscious effort to promote respectful relationships. Youthful learners tend to make less fuss than adults about inclusion, and learners with special needs could contribute to building a community. In this process commonalities are continuously discovered between learners who initially appear extremely diverse, and learners can gain pride in having opportunities to support others. In the person-to-person learning cycle, expanded awareness, new personal skills and a deeper sense of awareness is included. Through reflective practice in educating learners with special needs, educators become aware of their fears and learn to see their teaching in new ways (O'Brien & O'Brien, 1996:35). The following tools and systems have been developed for inclusive education (O'Brien & O'Brien, 1996:36).

There need not be a win/lose contest between inclusion and specialised services, but current boundaries, relationships and structures can be explored and modified. The result would be to find ways in which classroom and school activities are adapted to serve educationally important purposes rather than just emphasizing the decisions of a single psychologist. Education is the way of becoming a human being and the journey of human growth includes travelling alone, as well as a journey in personal relationships, whose quality will determine the depth of education (O'Brien & O'Brien, 1996:41).

TABLE 5 : TOOLS ASSISTING INCLUSION

TOOLS	SYSTEMS
MAPs (Making Action Plans) (O'Brien & Forest, 1989)	Cooperative Learning (Johnson & Johnson, 1994)
Creative Problem Solving (CPS) (Giangreco, Cloninger, Dennis & Edelman, 1994)	Circle of friends (Pearpoint & Forest, 1993)
Membership Stories (Ferguson, 1994)	Partner Learning (Thousand, Villa & Nevin, 1994)
PATH (Planning Alternative Tomorrows with Hope) (Pearpoint, O'Brien & Forest, 1993)	Inclusion facilitators (Tashie *et al.*, 1993)

The Department of Education (1997) makes the following statement on community-based support:

> All resources in the community should be utilised to develop and support education provision through a structured community participation approach. The strengths of existing community support systems in South Africa should be drawn on and developed in this regard (Department of Education, 1997:81).

Lazarus *et al.* (1999:52–53) also emphasise the importance of community-based support teams as central to support in South Africa, which would include the role of "parents, volunteers, non-government organisations, natural support systems, and other community resources". A holistic approach to challenges would require effective "intersectoral collaboration at district and site level" (Lazarus *et al.*,1999:53).

Non-governmental and voluntary organisations are an important stakeholder in this process as they have more freedom to act and should therefore be supported in the development of strategies. They can serve as catalysts or innovators, and organisations for people with disabilities should have active participation in needs identifications, advocating change, prioritising, administering and evaluation of change (UNESCO, 1994:76). Lazarus *et al.* (1999:57) argue that in South Africa several non-government organisations serve as valuable resources concerning expertise in issues of diversity and may contribute to developing an inclusive school in various ways.

Politicians and government officials should also continuously emphasise their commitment and encourage positive attitudes towards special needs among all members of the community. Mass media plays a vital role in this process, especially in promoting positive attitudes and providing information on new educational approaches (UNESCO, 1994:77).

Parents' perceptions of the criteria for educational services and satisfaction with services provided are critical in evaluating appropriateness or restrictiveness of services. Stoddard, Pike and Thomas (1994:30) view the input of the parent combined with the input from other team members as essential criteria for the best placement. Parents value this opportunity and usually base their reasons for a specific choice of school on specific services with value attached to the desired

outcomes anticipated for their child (Ryndak, Downing, Morrison & Williams, 1996:107,116–117). Palmer, Borthwick-Duffy and Widaman (1998:280) emphasise that the "complex dynamics underlying parent options underscores the need to encourage family involvement when considering such programs". Ryndak, Downing, Morrison and Williams (1996:117) share their findings in this regard:

> This research suggests that professionals will need to modify the manner in which they work with parents so that they can lessen the frustration parents feel when advocating for change. Professionals need to realise that parents have a critical role to play in the decision-making process, whether or not they, the professionals, agree with the decisions made. The actions in which the professionals engage should demonstrate respect for, and support of, parents so that a child's educational program reflects everyone's input.

Educational reform involves collaboration among school personnel, community members and students. Power and decision-making should be shared in an atmosphere of mutual respect with frequent critical review of educational practices. Transition planning processes, which constitute a team including the community agency, a parent, school counsellor, teacher, administrator and a learner who manages the process are effective (Villa & Thousand, 1996:181–183; Curwin & Mendler, 1988; Schrumpf, 1994; Villa & Thousand, 1996:185–187).

School support networks need to be established to serve the diversity of needs in the classroom and provide support to educators as well. A support network is described as a group of people meeting to brainstorm, problem-solve or perform any other activity that is required. Learners may also be included in this network. Individuals or teams may serve as district-wide support facilitators (Schaefer & Buswell,1996: 54–55).

Learners with learning disabilities are aware of the implications of their special educational placement and the accuracy of this perception is related to their age and intellectual maturity. This indicates that learners can serve as valuable sources by sharing their feelings and perception of certain elements of special education as recipients of service delivery. For instance, it was shown that recreational activities or instruction in specific subjects are often missed due to pull-out programmes. When planning service delivery the timetable should be structured to create a balance between remediation and inclusion in a variety of activities to prevent learners with special needs from losing out on instructional sequences, recreation, fun or social activities (Padeliadu & Zigmund,1996: 15–23).

All learners have a need to succeed and be acknowledged. Realistic expectations should be held for them, as increased participation decreases feelings of being different. A survey revealed that learners with special needs would like more responsibilities as they are often denied this opportunity. Greater sensitivity to learners' skills and feelings could also be achieved through consultation with learners (Wade & Moore, 1994: 165).

> Students are the only legitimate source for some of the answers we need for understanding and promoting school inclusion, because it is their world, not ours, that defines it (Schnorr, 1990: 241).

Parents and learners need options in a continuum of placements. Most parents hope their child will have friends and connections within the broader community. However studies reveal that learners with disabilities often have lower self-esteem than their peers when educated together. Schools therefore need to be restructured for inclusion to work, but learners need schools now (Bradley, 1994: 88; O'Neil,1994).

Friendship, parent partnership, learners as members of the instructional team and peer advocates constitute elements of collaborative team building. Friendship cannot be forced, but can be facilitated, encouraged and nurtured. A socialisation process that is effectively organised could provide excellent opportunities for academic, life, social, vocational and other skills required for adjustment and survival in a community (Stainback & Stainback, 1996:205; Strully & Strully, 1996:141).

The educational process of the learner with special educational needs should be shared by parents and professionals and inclusion is enhanced by positive parent attitudes. Parents do however need support, skills training and information in their role. This partnership should be prioritised by the government, including acknowledgement of parental rights and promotion of parents' associations and consulting parents in learning programmes (UNESCO, 1994:75, Switlick & Bradley, 1997:105; Switlick & Bradley, 1997:105; Villa, Thousand, Nevin & Malgeri, 1996:170).

2.4.4 FROM ISOLATION TO COOPERATION AND SUPPORT IN INCLUSIVE EDUCATION

> The separate systems of education which presently exist ('special' and 'ordinary') need to be integrated to provide a system that is able to recognise and respond to the diverse needs of the learner population. Within this integrated system, a range of options for education provision and support services should be provided. Learners should have the ability to move from one learning context to another (e.g. form ECD to GET, from a specialised center of learning to an ordinary center of learning, or from a formal to a nonformal programme). The system of education should be structured in such a way that, irrespective of the learning context, opportunities for facilitating integration and inclusion of the learner in all aspects of life should be provided (Department of Education, 1997:68).

The general principles for educational support include identification, evaluation and counseling within a collaborative framework. Effective prevention of individual disabilities and difficulties should involve school-community linkages as mentioned. The community needs to be informed about disability and educated about its responsibility towards it. People's perceptions of individuals with intellectual disability individuals are more complex than is generally acknowledged. The framework for an inclusive education and training system as stated in the Education White Paper 6 (2001) provides a framework for inclusive education for learners with disabilities. This framework includes the vision of building capacity in all Department of Educations, strengthening the capacities of all advisory bodies and establishing district support teams. The vision promotes the transformation of special schools to resource centers and establishing lifelong educational centers (Department of Education,1997:55–68). The Department of Education (1997:87) further assert that "guidelines for staff provisioning in provinces" need to be developed at a national level to enable support. White Paper 6 (Department of Education, 2001:48) states that at institutional level, training institutions will be assisted in establishing 'institutional-level support teams'. The primary function of these teams will include:

> ...to put in place properly co-ordinated learner and educator support services that will support the learning and teaching process by identifying and addressing learner, educator and institutional needs. Where appropriate, institutions should strengthen these teams with expertise from the local community, district support teams and higher education institutions. District support teams will provide the full range of education support services, such as professional development in curriculum and assessment, to these institutional-level support teams (Department of Education, 2001:48).

School support teams should focus on "preventative and promotive strategies", the development of an "'inclusive' teaching and learning environment" and support to the school as a whole. The educational psychologist could play an important role in the district support team and Lazarus *et al.* (1999:55) formulate the following core competencies that are viewed as essential for facilitating institutional transformation and support are:

> management and coordination of support, educator and parental support; psychosocial, paramedical and medical support of learners; and institutional and curriculum development.

White Paper 6 (Department of Education, 2001:46) indicates that the provincial departments of education will play a leading role in institutional capacity building and provincial Department of Educations will be assisted in this process. The Minister of Education in collaboration with the nine Members of the Provincial Executive will oversee the development of the inclusive education and training system. All advisory bodies will play an important role and an effort will be made to strengthen the membership of these bodies to ensure effective and timely advice to the Minister of Education (Department of Education, 2001:46).

Education support services will be strengthened through new district-based support teams. Their primary function will include:

> ...to evaluate and, through supporting teaching, build the capacity of schools, early childhood and adult basic education training centers, colleges and further and higher education institutions to recognise and address severe learning difficulties and to accommodate a range of learning needs (Department of Education,2001:47).

The Department of Education (1997:64) asserts that partnerships between stakeholders needs to be encouraged as various government departments and other sectors should collaborate in providing extensive support to learners with special needs. The practical implications of this process would include the development of "structures at all levels of education governance", clear "lines of accountability and responsibility", "clear procedures and processes" and the involvement of relevant NGO's at various levels of the education system (Department of Education, 1997:64). Within the context of the above statement, the White Paper 6 (Department of Education, 2001:46) indicates that the:

> Department of Education and the nine provincial departments will play a critical role...in laying foundations of the inclusive education and training system.

Special schools and classrooms could be phased out. Special educators and therapists become a team and facilitators of support networks. The wealth of funds allocated for special education could be integrated into general education which could render valuable support to establishing inclusive schools, support networking and community building (Stainback & Stainback, 1996:197). During the process of collaboration it is revealed that a special educator has "no special bag of tricks" as Barry (1994:6) argues:

> Good teaching is good teaching. Someone who works with learners with special needs may have to spend much more time explaining, modelling, interacting, or practising particular strategies, but strategies that work well with labelled learners usually work just as well with non-labelled learners.

Paraprofessionals (school system-paid classroom assistants) and teaching teams assist learners in support. The special educator consults, collaborates and instructs directly, becoming an instructional manager. The paraprofessional becomes a facilitator in instructional and behavioural support and an extension of the special education educator, not merely an assistant or playground supervisor. These role changes will require more preparation and training. Further benefits from this kind of collaboration include that more learners are supported, self-confidence of educators increases and there is an increase in tolerance level. Conflict resolution skills, flexibility, sharing of responsibility for all learners, the removal of isolation, and stimulation in professional discussion are further advantages (Bradley & Switlick, 1997:110; Wadsworth & Knight, 1996:166).

Teaching teams are instructional arrangements where two or more members of the school and community share planning, instruction and evaluation for specific learners. The size of the team and composition of members involved may differ. There could be a combination of educators, specialised educators, community volunteers, student teachers and learners themselves. Tutors also benefit as they are trained in communication skills and self-esteem (Thousand & Villa, 1990:152–153; Villa & Thousand, 1996:173).

Various service delivery models are therefore available. Collaborative problem-solving therefore implies that teachers and specialists such as educational psychologists are equal partners sharing their expertise to benefit the learner.

Interpersonal communication and a framework for problem solving combined with mutual trust and respect is essential for the success and teacher reflection is also enhanced (Bradley & Switlick, 1997:115,116; Parrilla (1999:108). The interdisciplinary team (group problem-solving) indicates school support teams (interdisciplinary/multi-disciplinary), which serve many schools and also render assistance to educators. All staff can collaborate on a regular basis and team members are equal contributors (Bradley & Switlick, 1997:115). Peer coaching constitutes the presentation of a conceptual framework or a teaching technique, as well as modelling thereof, to encourage transfer. Educators coach each other and structured feedback is provided. The staff may join a workshop and later pair up with a peer. Diversity in skills creates the opportunity to share expertise. General and special educators have opportunities to improve their skills and teaching behaviour, ineffective teaching behaviour decreases, and professional relationships are enhanced. Transformation runs the risk of rejection, but peer coaching supports practice, which facilitates steady, consistent change, and increased learner achievement is observed (Bradley & Switlick, 1997).

During cooperative teaching (co-teaching), special education educators form teaching partnerships with general educators. In co-teaching the special educator is involved in planning, evaluation and direct teaching and this is accomplished in a variety of ways such as complementary instruction, supportive instruction and team teaching. With complementary instruction, the classroom educator delivers the content material and the special education teacher provides learning strategies, increasing the opportunity for generalisation. Supportive learning activities implies that the core content is supplemented with various pathways ("multiple pathways") which provide content enhancement. With team teaching, more than one teacher plans, instructs and evaluates one or more groups and take responsibility for all the learners in the class. This method can be applied in many ways: Station teaching takes advantage of the expertise of each educator (or focuses on a piece of curriculum) and is often used with learners with various ranges of needs. Other teachers prefer parallel teaching where the class is divided into two groups and the same content is instructed (this is useful when differentiated curricula or skills are instructed). Shared instruction, where both take the lead at the same time is often used where there are learners with mild to moderate disabilities (Bradley & Switlick, 1997:121).

The structure for learning is maintained (logistical support) as one educator is still available when the other is absent, teaching becomes fun, and learners have more opportunities for successful learning experiences and exposure to various teaching styles. A lower learner/educator ratio may be created and the need to segregate education may be minimised (Bradley & Switlick, 1997:123–124).

The primary considerations in selecting a model are the range and intensity of the learner's needs, interventions that are appropriate for those needs, the school structure, the philosophy of management, the existing personal and professional relationship of staff members, and time scheduling. Schools could experiment with ideas to provide co-planning opportunities and the following guidelines are given: special educators can be included in the master schedule, special activities such as music and art must be scheduled at times when the collaborating teachers can be released at the same time, duties (lunchroom, hall and recess) should be scheduled to create free time for educators to work together. Paraprofessional, interns, students and volunteers could monitor non-instructional activities (Bradley & Switlick, 1997:124-125). Indirect service delivery is a characteristic of school-based consultation, together with good relationships with each other (consultant and consultee) and involvement of all stakeholders (Druker & De Jong, 1996:20).

Research information is important to improve teaching. Documentation centers (supported at national level) could be established to pool experience. Research on special needs education should be included at research institutions, educators should be actively involved and pilot projects need to be launched for guidance toward future actions. International collaboration could also be of value (UNESCO, 1994:69).

2.4.5 RESOURCE REQUIREMENTS

Distribution of resources should take realistic account of needs and expenses. Pilot projects may be funded in certain areas as a means to gain expertise for expansion. Training of educators should also receive resources. Combining various resources could be purposeful, for instance, the educational and social approach which will enable cooperation between various levels of the ecosystem (UNESCO, 1994:42).

In the United States overall effective reform has not been accomplished yet due to concepts being too general for teachers to use and staff development inadequate. The importance of effective staff development opportunities and strategies for providing technical assistance is emphasised (Schaefer and Buswell, 1996:51,57). According to Lazarus *et al.* (1999:58) the lack of basic resources could serve as barriers to learning in inclusive schools and district support teams will need to assist schools to develop their own resources.

Williams (2000:6) describes the Department of Education's focus through the following key principles: First, resourcing should be based on "educational need rather than on the category of disability or impairment" and the resources should also target the "support system and programme and not the disability". District and institution level support teams will receive resources and an "inter-department approach to resourcing between Education, Health [,and] Welfare will be necessary" (Williams, 2000:6).

2.5 CHAPTER SUMMARY

The following questions were formulated at the beginning of this chapter:

- What should we be doing? (Values)
- How might we do it? (Pragmatics)
- How is it working? (Working and effects)
- Why is it like it is? (Interpretation).

Rouse and Florian's (1996:83) opinion summarise the content of this chapter in response to the introductory questions: They note that inclusive practice must be understood within a cultural, political and social context. Effective inclusive schools are viewed as diverse problem-solving organisations with a common mission that emphasises learning for all. Staff must be committed to teamwork and create a climate conducive to learning where the responsibility for all learners is shared. This commitment requires "clear policies, administrative leadership and long-term professional development". The issue of diversity creates many ways to develop inclusive schools, but a constant factor is the need for long-term professional development of staff and planning, which should involve all the stakeholders and be informed by research. As Kavale and Forness (2000:279) note inclusion

"requires careful thought and preparation" and should "be implemented with proper attitudes, accommodations, and adaptations in place". These authors further suggest that adequate support structures toward inclusive education are not in place as yet: "Consequently, a more tempered approach that formulates and implements policy on the basis of research and evaluation findings as well as ideological and political considerations is necessary".

As indicated, the systematic way to address inclusion is by creating a vision, which is then followed by skills, incentive, resources and an action plan which results in change. The general impression was created that the recommendations of the commission report follow this process and that the way forward is clearly indicated by the Department of Education (1997:86) and White Paper 6 (Department of Education, 2001). The model of Organisation Development (OD) consultancy[4] may serve as a framework for the educational psychologist towards providing support in inclusive education especially as this model is "located within a systems thinking framework, and as such moves away from the notion of school problems being located within particular individuals or groups, towards the idea of a dynamic, complex and interconnected system" (Druker & De Jong, 1996:21) and they further cite Gray and Starke's (1980:333) argument that OD "is a process rather than a solution".

Nastasi *et al.* (1998:230) assert that the participation of educational psychologists in mental health services, which includes programming, should be ensured and "documentation of real-life interventions conducted by practitioners through systematic evaluation and/or research, including data collection, analysis, interpretation, and dissemination must be promoted" To promote viable programme evaluation the following questions are asked: "Do we need to redefine the scientist-practitioner (or practitioner-scientist) in school psychology to include one who not only applies research to practice but also generates research as a fundamental part of practice?" (Nastasi *et al.*, 1998:231).

I view the topics that were reviewed in this chapter as relevant to the role that an educational psychologist could play when supporting learners with Down syndrome toward a more inclusive educational. The educational psychologist can

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[4] Known as whole school development in South Africa (Druker and De Jong, 1996:17)

play a role towards facilitating change in the educational community and plan systematic procedures to address change. This could include facilitating, canvassing and voicing issues at national level. In conclusion I endorse the following statement made by UNESCO (1994:55):

> What is required is a commitment and political will to bring about change – change in human attitudes and behaviour, and the modification of development strategies. Through Education for All, it should be possible to enable all human beings – including the disabled – to develop their full potential, to contribute to society and, above all to be enriched by their difference and not devalued. In our world constituted of differences of all kinds, it is not the disabled but society at large that needs special education in order to become a genuine society for all.

CHAPTER THREE
EDUCATIONAL PSYCHOLOGICAL SUPPORT FOR LEARNERS WITH DOWN SYNDROME

3.1 INTRODUCTION

In this chapter I review literature on educational psychological support for learners with Down syndrome within an ecosystemic framework. Although the review in this chapter seems very broad, I view it as important to include it in my report with the purpose of contextualising my study in more depth. Questions of identification, diagnosis, support and comorbidity strengthen this view (Refer to Figure3 and Figure 4 in chapter one, pages 40 and 41). Secondly, this review reflects my understanding of psychological classification, assessment, diagnosis and support and informed the way I conducted my study.

3.2 IDENTIFICATION, DIAGNOSIS AND CLASSIFICATION OF SPECIAL NEEDS

3.2.1. IDENTIFICATION AND CLASSIFICATION

The concept "classification" first needs to be placed within the context of the Constitution of the Republic of South Africa, Act 108 of 1996. South African law lays down that everyone has the right to equal protection and benefit from the law. It classifies individuals into categories of infant, minor and major according to contractual capacity. The criteria for establishing equity and inequality of categories of people remain contentious as legal classification may be viewed as equal treatment for all, if the classification is relevant for the purpose. The equal protection clause indicates limitations in the very definition of the concept, as un-equals, such as juveniles in relation to adults, need to be treated unequally to provide legal differentiations based on age. Secondly, the common law rule that "the best

interests of the child" is decisive in consideration of the learner is embedded in the Constitution. The learner's right to appropriate care and equal education as well as the prohibition of admission tests at schools have implications for previous practices in assessment, classification and support of learners with special educational needs (Robinson, 1997:49, 256, 285 - 302). Special needs do however need to be identified in order to provide adequate support. The relevance and the importance of the identification of individual needs and support during the early years of the learner are specifically acknowledged by the Department of Education (2000:18). It further declares that assessment processes need to "address barriers to learning and new policies and practices will be reviewed and revised to ensure that the needs of all learners are acknowledged and addressed" (Department of Education, 2000:18).

In the identification and classification of special needs the microsystem and the internal factors contributing to special needs constitute the focus, as indicated in Figure 3 in chapter one (Donald et al 1997:71). Archer and Green (1996:123) view classification as follows:

> Classification is a fact of life, and is inherently part of our society. It is a way of sorting, ordering and systematizing the complexities of our lives. However, in South African history, it is a concept so fettered to apartheid that it is difficult to view the term objectively. Classification was the cornerstone of the policy of racially segregated education and therefore any proposal to classify learners yet again, understandably appears suspect. However, classification need not discriminate in a negative way.

The process of classification should therefore firstly be evaluated critically and secondly I believe that when one speaks of the classification of special needs, argument on the diagnosis of psychological disorders should be included, as diagnosis often implies classification. The diagnosis of psychological disorders has traditionally been defined as a pattern of symptoms as shown by the individual and associated with a degree of distress, a degree of disability and the increased risk of death, pain, disability or loss of freedom. Childhood problems must however also be described in terms of relationships. General terms used to describe abnormal behaviour should include the description of people and patterns of behaviour occurring in certain circumstances. Problems shown by learners may also be the attempt to adapt to unusual circumstances. The problem with concepts of classification such as "intellectual disability" is that they become general labels and abnormal behaviour may be expected by significant others. Thus, such learners

develop a self-concept in which their difference is experienced as overriding, rather than one part of their lives that constitutes a specific challenge to their development. The classification of special needs is, however, important to aid clinicians and researchers in describing, organizing and expressing the complex features often associated with various patterns of behaviour. It serves a purpose in describing the psychological status of learners, their unique coping strategies as well as ways of compensating for difficulties. A classification system is useful to ensure effective support for healthy adaptation, to facilitate general and interdisciplinary understanding and to relieve anxiety. However, the rights and dignity of learners with disabilities need to receive priority and limited access, because of the label to educational and job opportunities should be prevented (Archer & Green, 1996:123-126; Dyson and Gains, 1993; Donald *et al*, 1997:232; Mash & Wolfe, 1999:5,6).

For the purpose of this chapter I refer to the summarized diagram of the classification of special needs as presented in Figure 10. The Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) (First:1994) and specifically the section named "Disorders usually first diagnosed in infancy, childhood or adolescence" was used as point of departure in Figure 10, as statutory requirements demand that all educational psychologists need to acquire core competencies in the diagnostic criteria stipulated in this manual (Mash & Wolfe, 1999:G-3).

Because of the notion that many childhood learning disorders are neurological in origin, learners have frequently been indiscriminately labelled as being brain-damaged or neurologically impaired. However, it has also been suggested that the causes of learning problems could include factors such as poor teaching, intrafamilial stress or cultural pressures. Psychological tests generally do not provide suitable measures of "brain damage" and this is one of the contributing factors that have moved neuropsychologists in the direction of describing the effects of cerebral malfunction in terms of syndromes. In clinical diagnostic practice several psychologists have proceeded to syndrome analysis (Walsh, 1987:21; Jansen, 1996:145; Luria, 1970:66).

As intellectual disability and learning difficulties are characteristics of Down syndrome, the study of these two fields is inevitably included in a study of learners with Down syndrome. Intellectual disability "refers to significantly sub-average general intellectual functioning (two standard deviations below the normal) existing

concurrently with deficits in adaptive behaviour and manifested during the developmentalperiod" (Kaplan & Sadock, 1981:851). Cramer and William (1996:xxvii) define learning disabilities as follows:

> The term learning disabilities covers a variety of disorders in the domains of listening, speaking, basic reading skills, reading comprehension, and mathematical calculation and reasoning. These disabilities interfere with an individual's ability to store, process, or produce information and are unexpected, given the individual's general level of ability.

Cramer and William (1996:xxvii) argue that learning disabilities remain one of the most debated processes that affect young learners in terms of definition, diagnosis, assessment and support procedures, and up to now a valid scientific basis for the study of learning disabilities and interrelationships with other developmental disorders has not been established. Since 1980 serious systematic research efforts have, however, been made, but the endeavour towards a scientific understanding of learning disabilities and the "educational, linguistic, genetic, physiological, and neuropsychological correlates" is ongoing. There is a need for research on the design and conduct of support for all types of learning disabilities and further inquiry will hopefully eventually result in effective support methodologies for all learners (Cramer and Ellis, 1996:47; Cramer and William, 1996:4). The Diagnostic and Statistical Manual of Mental Disorders (DSM IV)(First, 1994:37) indicates an intelligence coefficient of 70 or below with onset before the age of 18 years, for intellectual disability. The concept "disorder" is generally used in DSM IV (1994). Associated deficits in adaptive functioning are observed in skill areas such as communication, self-care, home living, social skills, community use, self-direction, health and safety, functional academics, leisure and work. The two major approaches to the definition of intellectual disability are the biomedical and sociocultural adaptation models. The sociocultural model includes a focus on "the developmental impairment in infancy and preschool years, on learning difficulties in school age, and on poor social-vocational adjustment in adulthood" (Kaplan & Sadock, 1981:851; Hallahan & Kauffman, 1994:118).

PROBLEMS RELATED TO PHYSICAL AND MENTAL HEALTH:

Feeding and Eating Disorder of Infancy or Early Childhood:
Pica, Rumination Disorder, Feeding Disorder of Infancy or Early Childhood.

Eating Disorder of Adolescence: Anorexia Nervosa, Bulimia Nervosa.

Other Disorders of Infancy, Childhood or Adolescence:
Selective Autism, reactive Attachment Disorder of Infancy or Early Childhood, Stereotypic Movement Disorder, Disorder of Infancy, Childhood or Adolescence Not otherwise specified.
Child abuse and neglect: Physical Abuse, Neglect, Sexual Abuse, Emotional Abuse.

Health related disorders and Physical disabilities:

Sleep Disorders, Elimination Disorders: Encopresis and Enuresis.

Chronic Childhood Illnesses: Diabetes Mellitus, Childhood Cancer.

Respiratory problems: Asthma, Cystic fibrosis.

Neuro-muscular disabilities: Cerebral Palsy and low muscle tone, Neurological Seizures (Epilepsy).

Common neurological disorders: Include cerebral trauma, intracranial tumors, cerebrovascular disorders.

Neuromotor impairments: Traumatic brain surgery, seizure disorders, cerebral palsy, spiral cord disorders-spinal disruption of higher cerebral function: asphasia, agnosia, apraxia, amnesia, dementia.

Degenerative diseases: (muscular dystrophy, spinal muscular atrophy); orthopaedic and musculoskeletal disorders (curvatures of the spine, hip conditions, limb deficiency, juvenile rheumatoid arthritis, muscoloskeletal disorders).

Orthopaedic and Muscoloskeletal Disorders: Curvatures of the spine, Hip conditions, Limb deficiency, Juvenile Rheumatoid Arthritis, Muscoloskeletal disorders.

Major health impairments: Congenital heart defects, blood disorders-Haemophilia and Sick cell anaemia Asthma, Cystic Fibrosis, Insulin Dependant Diabetes Mellitus, Chronic renal Failure, Childhood Cancer.

Infectious Diseases: Congenital infections, acquired infections and Acquired Immune Deficiency Syndrome (AIDS).

Malnutrition: Unbalanced nutrition and Under nutrition (Insufficient Nutrition): are chronic, overlapping and affect physical as well as cognitive functioning. Common in conditions of poverty in South Africa.

Chronic Respiratory Infections: Frequently untreated in context of poverty, may develop into more serious and longer-term problems.

Tuberculosis: Chronic otitis media (Middle Ear Infection): May become chronic (especially if colds are untreated), painful and affects hearing. Allergies and Asthma. Parasite Infection: bilharzias is of particular concern (affecting up to 90% of school children in some parts of KwaZullu Natal) sickly, pain, lacking energy, each individual disability should be understood within its social context.

SENSORY DISABILITIES:

Visual disabilities: Legal Blindness, Poor Visual Acuity, Visual-field deficits, Ocular Motility Abnormalities, Light & colour Perception Impairments, Abnormalities of the visual cortex and brain function.

Hearing Disabilities:Sensor neural (neural mechanisms of hearing have not developed adequately, severe hearing loss) or conductive hearing loss.

(Wolf Heller, Alberto, Forney & Schwartzman,1996; Donald et al, 1997:260; Walsh, 1987:103,108,111,113,116; Jansen, 1996:153; DSM IV, 1994; Mash & Wolfe, 1999)

These definitions can only become practical by the assessment of intellectual ability

and functional skills, but this process has become a contentious issue, due to the broadening of the definitions of intelligence. The above-cited definition of intellectual disability disregards the questions of cause, the nature versus nurture controversy and the potential for development, which have contributed to the complexity of intellectual disability (Hallahan & Kauffman, 1994:119; Kaplan & Sadock, 1981:851).

In previous years professionals classified learners with intellectual disability according to the terms "mild, moderate, severe and profound disability" and each level was associated with approximate intelligence coefficient levels. The following degrees of severity are indicated by the Diagnostic and Statistical Manual of Mental Disorders (First, 1994:40):

TABLE 6: DEGREES OF SEVERITY OF INTELLECTUAL DISABILITY

DEGREES OF SEVERITY	INTELLIGENCE COEFFICIENT
Mild Intellectual Disability	50-55 to approximately 70
Moderate Intellectual Disability	35-40 to 50-55
Severe Intellectual Disability	20-25 to 35-40
Profound Intellectual Disability	Below 20 or 25

There have been many changes in the study of intellectual disability of which one of the most significant is the difficulty of designating a person as intellectually disabled. Professionals have become more reluctant to apply labels as they have become increasingly aware that misdiagnosis often occurs in ethnic minority groups and of the harmful effects of the stigma of diagnosis. Many professionals are of the view that intellectual disability is a socially constructed term. Schools and parents are therefore more likely to use the label "learning disability". Learning disabilities are described as occurring when academic function is substantially below that expected in the context of the learner's chronological age, assumed intelligence and level of education (First, 1994:38-44; Hallahan & Kauffman, 1994:116; Kaplan & Sadock, 1981:851).

In the context of the emphasis on the socio-cultural construction of intelligence, the validity of the concept "intelligence" as an explanatory concept is also debated.

Moreover, the literature indicates that effective learning and intelligent behaviour do not depend on "intelligence" alone. Sternberg (1984) has described intelligence broadly as purposive or successful adaptation in a real-world context. Intelligence would then include whatever characteristics lead to such adaptation, including continuing acts of creativity in practical problem-solving. It is also believed that much of the learning that matters for success in real-world pursuits happens in the absence of formal instruction. Traditional intelligence tests also measure only a subset of the competencies required for maximal performance in everyday situations. The process of successful ageing (including intellectual adaptation and functioning throughout life) may be related to the individual's potential for selecting life-course goals for which internal and external sources of support are available. This model informs the present discussion of the current status of research and the identification of some future directions for life-span research on the functions and pragmatics of intelligence. Within the context of the theory on multiple intelligences, which was framed in the light of the biological origins of each mental faculty, Walters and Gardner (1986:181,182) assert, "biological proclivity to participate in a particular form of mental activity must be coupled with the cultural manipulation or embodiment of that activity". Vygotsky (Gindis, 1995) views intelligence tests as having poor "ecological" validity, indicating that the transfer of these tests from the psychologist's office to everyday life is questionable. From his perspective disability is viewed as a process and not static condition, which then opposes the concepts of "intelligence coefficient" or "mental age" and quantitative diagnostic procedures. Development is consequently viewed as a dialectical process of mastering cultural means and intelligence tests are evaluated as insufficient in making the differentiation of the origin or origins? Differentiation seems to imply more than one of intellectual disability. The emphasis is placed on the phenomena that developmental assessment should concentrate on: the qualitative indicators of mental processing such as the cognitive strategies employed by the learner, the type and character of mistakes, the ability to benefit from mediation, and emotional reactions to success or failure. Concepts such as identifying what a learner has already attained and potential ability to learn (the theory of disontogenesis) therefore form possible alternatives to standardized tests and set a course for educational psychology to follow (Dixon & Baltes, 1986:226; Ford, 1986:184; Green, 1996:130-131,132; Klemp & McClelland, 1986:31; Olson, 1986:338; Scribner, 1986:28; Schaie, 1986:264; Sir Karl Popper, 1972:338; Sternberg, 1986:2; Walters & Gardner, 1986:165; Wagner & Sternberg, 1986:51; Willis & Schaie,1986).

3.2.2 ROLE OF THE EDUCATIONAL PSYCHOLOGIST

The ecosystemic bias of my study indicates an ecological focus for the role of the educational psychologist during identification and diagnosis of special needs. The concept "diagnosis" means, "to know" (from the Greek "gnosis" meaning "to know" and "dia" meaning "through" in place and space). Diagnosis in the psychiatric nomenclature assumes that the individual is the site of pathology and the diagnostician looks for the pathology in the individual in an effort to name it. From an ecosystemic perspective the classical medical model for psychopathology is viewed as atomistic, reductionistic and anti-contextual. The concept of pathology is inconsistent with ecosystemic thinking, as "malfunction" is attributed to a system and not viewed as intrinsic to a system. The psychologist functioning from an ecosystemic perspective attempts to understand the system through as many levels of the meaning and experience as can be apprehended. Bateson (1958:281) views diagnoses as a process "of weaving several levels of abstraction", and although different psychologists may explore the same information, the information is ordered differently according to the epistemological base of the psychologist. An ecological focus involves observing the individual in whatever life contexts appear relevant to clinical issues and the presenting problem. Whether one views a particular learner as disturbed or disturbing, existing diagnostic classification systems largely focus on the descriptions of consistent patterns of symptomatic behaviour. Systems functioning can be assessed without judgments about what is right or healthy and what is wrong or sick, which frees the psychologist from the obligation to judge or blame, while the ecosystemic paradigm focuses on the experience between individuals and between levels of the system. Diagnosis is compared with map-making or setting out on a journey with continuous revision of the map. Names are viewed as shared metaphors between the diagnoser and the system being diagnosed. Assessment and support in an ecosystemic framework would therefore extend beyond the individual to the interactions within the individual's ecosystem. This process of integrating the various levels of experience in order to grasp the dynamic relationships among them then constitutes systemic diagnosing within an ecosystemic framework (Auerswald, 1973:699-700; Combrinck-Graham, 1987:504-506; Keeney, 1979:118,119; O'Connor, 1977:16; Wilkinson & O'Connor, 1982:986).

From an ecosystemic perspective a psychologist has a specific role in and

relationship to the system. Diagnosing is viewed as inseparable from providing support. Systems are functionally organized in relation to their own components and the psychologist's interpretation of his/her role will appear in behaviours which will become part of the way the therapeutic system operates and will include a "coupling" between the components of the therapist system and the client system. This implies that personal experiences blend into the shape of the metasystem (the system of systems). The ecosystemic framework, as an alternative to traditional diagnosis, therefore suggests getting to know challenging situations or needs in an ecosystemic context (Combrinck-Graham, 1087:505; Keeney, 1979:117,118). I will elaborate on support later in the chapter.

Relating diagnosis to a second-order cybernetics approach implies that the reality of the problem or need is viewed as linguistically shaped by those interacting around it, including the psychologist. This co-constructed reality contributes to the problem's endurance by narrowing the choice of more effective solutions. The psychologist will facilitate a therapeutic conversation to provide a context for new linguistic distinctions, shifts in beliefs and behaviours as well as creative solutions. A first-order cybernetics approach would seek to discover cybernetic patterns that account for symptom behaviour (Griffith, Griffith & Slovik, 1990:13).

Diagnosis may be conducted from various levels of observation in the system. The various systems can be visualised as boxes nested within one another and each level of the system is "framed" or given context by the systems around it and "frames" the systems within it. The level of content could include the content of the therapy itself. The second level is the way in which the client is described by professionals and educators, such as "regressive" or "manipulative". The level of the individual is added to the content level and includes the client's response in description of how he/she is behaving, feelings, intellect, personal history and relationship with other people in the context. The family is regarded in terms of three sublevels, aside from each individual level, which are the sibling relationship, the marital relationship and thirdly the level of the whole family structure. At the level of the therapeutic system the role of the psychologist is cast. The psychologist's presence and the ways of diagnosing affect the system as the psychologist is always a part of the field being observed. The metaphor of power can be replaced by "part in an ecosystem" and not an outside spectator. The psychologist acts on the client and the client acts on the psychologist simultaneously and these simultaneous interactions characterize a

whole system. The implications for diagnosis are that the psychologist can come to understand more of the system only by interacting with it and the way in which one interacts determines whether change will occur. The medical system level and educational system level indicate a further level for diagnosis. The system levels may be characterized separately or together and it is important to assess feelings and relationships of its members during the process. A diagnosis about the learner's physical and emotional state as a basis for support is expected from the diagnosing system, but the process of diagnosing is nevertheless also viewed as important. A biologically orientated clinician may only study one level of the system, indicating that a client may benefit from psychotropic medication, but change may be due to the chemical effect of medication or due to the systemic effect of the medication. Ecosystemic diagnosing therefore evolves from seeking the coherence of all of these levels of system functioning and provides multilevel opportunities for understanding system functioning and for choosing interventions (Auerswald, 1977; Combrinck-Graham, 1987:507-508; Keeney, 1979:123-125).

Confusion arises when one thinks linearly and still attempts to identify a relationship system. For example when one considers a relationship system as a combination of discrete properties such as role, values and motivations, one is using a linear, non-ecosystemic epistemology. An ecosystemic epistemology defines "system" as a cybernetic network that processes information where the cybernetic network refers to the context of completely intertwined human relationships in which the relevant information processes include symptomatic and therapeutic communications. This type of system is referred to as an ecological relationship system. When we are confronted with the complexity, such as the networks of human relationship, our sensory limitations lead us to the "fallacy of misplaced concreteness". The client's "symptoms" and the "therapist's interventions" are rather seen as communications within an informational network of human relationships. The psychologist should look for the communicative function of symptoms within an ecological relationship system. The goal of therapy then becomes changing the ecological relationship system in order to change the metaphors of relationship. Viewing a symptom in terms of its etiology and pathology only converts the relationship metaphor. Interconnectedness allows for the symptomatic message to shift form various individual sites and makes it essential for the psychologist to treat the relationship network rather than focus exclusively on any isolated part. The psychologist should therefore redefine the symptom/problem in interpersonal terms to help the client to see the symptom as part

of a relationship system rather than exclusively located within an individual. The shift toward a more ecosystemic epistemology involves moving away from blaming the identified person or blaming etiological factors for causing symptoms which leads to a stage of awareness where there is no longer any person, group or etiological factor to blame and be angry with. There has also been an expanding awareness of the psychologist's own relational field, which includes his/her professional network (Bateson, 1958:96-100; Keeney, 1979:120-125).

This way of diagnosis is described as "Taoistic", where one does not purposively seek information in any strict programmed format, but becomes receptive to the experience. Maslow, as cited in Keeney (1979:126), describes, "Taostic knowing" as receptive openness, which indicates a process of finding order, rather than ordering. An ecosystemic epistemology is therefore in tune with a non-purposive, process-oriented way of knowing which, according to Keeney (1979:126), indicates a "circularity scientist". Keeney (1979:126) further notes that:

> When one can forget theory and technique, abandon purposive knowing, and attend to the "doing of non-doing" or the Wu-Wei of the Taoist, one can then diagnose in an ecosystemic way.

3.2.3 SUMMARY

In summary if a medical model for the classification of special need is adopted, one should then consider the usefulness of the categories and identify whose interests are served by the categories. Usefulness is indicated if an assigned label determines specific support or reduces anxiety. Labelling focuses on intrinsic deficits, moving attention away from contextual factors. The two most complex categories of classification are "mild to moderate intellectual disability" and "specific learning disabilities", especially within the South African context, as there are many sources of learning difficulties and the categories could be used as "dumping grounds" for learners who have difficulties. On the one hand it is also argued that classification could deny a certain social class access to educational and social opportunities and on the other classification may be to the advantage of certain learners in tending towards protecting their rights until schools have developed into "gradeless" multi-age educational centers. Belonging to a disability culture could also have certain advantages and disadvantages, for instance some disability categories such as the deaf see themselves as a cultural group with value to them, rather than a disabled

group. Educators working with special education should take cues from these communities and give merit to the notion of promoting the cultural aspect (Archer & Green, 1996:123-128; Hallahan & Kaufman, 1995:69).

To acknowledge the needs of learners an ecosystemic approach is recommended to the educational psychologist for the identification and classification of special needs. This notion is supported by the Department of Education (1997:54) through the following statement:

> All aspects of the education system would need to be changed if it is to respond to the needs of all learners. Strategies and programmes traditionally aimed at meeting "special needs" must move away from an isolated focus on "changing the person" to a systems-change approach.

As suggested in the above section, diagnosis and support are viewed as inseparable from an ecosystemic framework. The following section will therefore concentrate on a review of psychological support for learners with special needs.

3.3 EDUCATIONAL PSYCHOLOGICAL SUPPORT

3.3.1 INTRODUCTION

> Different government departments and other sectors would need to work together to provide comprehensive support to learners. Partnerships between relevant stakeholders should therefore be promoted (Department of Education, 1997:64).

Within the context of the above statement and the discussion in chapters one and two, the general principles for educational support include identification, evaluation and counselling within a collaborative framework. Effective prevention of individual disabilities and difficulties should involve school-community linkages. The community needs to be educated on its responsibility toward disability and informed about disability. People's perceptions of intellectually disabled individuals are more complex than is generally acknowledged. The framework for an inclusive education and training system as stated in the Education White Paper 6 (2001) provides for inclusive education for learners with disabilities. This framework includes the vision of building capacity in all Department of Educations, strengthening the capacities of all advisory bodies and establishing district support teams. The vision also includes improving and converting special schools to resource centers and establishing

lifelong educational centers. Institutional level support teams as well as mechanisms for early identification of learning difficulties at community level are also planned. The development of the professional capacity of educators and pre-testing instruments are also prioritized within this vision.

The envisioned Strategic Implementation Plan (SIP) is concerned with creating a single education system in South Africa with a range of options for education provision and support. This would include the opportunity to move from one learning context to the other with a continuous focus on facilitating inclusion of the learner into all aspects of life. The structures that would take responsibility for the transitional arrangements are the Interim Implementation Committee (IIC), the National Council to Address Barriers to Learning and Development (NCABLD) and a National Center of Research (Department of Education, 1997:140). Support services need to focus on supporting the ecosystem as well as individual learners. This would imply that the capacity of the education system to respond to diversity would be developed. It would also require support to the system of education and training of educators in the full range of assessment of and support for special needs. Barrier-free access to all centers of learning is required as well as a holistic approach to institutional development. The promotion of the rights and responsibilities of parents, learners and educators is emphasized and a flexible curriculum would need to be developed. The development of holistic and integrated support services as well as community-based support and a preventative and developmental approach to support are prioritized by the Department of Education (Department of Education, 1997:55-68). Center-of-learning-based teams (CLBTs) would need to be established. Support personnel would be appointed and the role and functions at district level would include service co-ordination, systems assessment and support, learner support and educator support and training (indirect and consultative mode of service delivery). Skills and expertise, which can be accessed, would vary among communities (Department of Education, 1997:88).

In summary the Department of Education (1997:87) prescribes the following responsibilities for the holistic, integrated development of support services:

> It will be the responsibility of the education management at the national and provincial Department of Educations to make a concerted joint effort to communicate the implications, challenges and opportunities of an inclusive education and training to all role players. At national level, guidelines for staff provisioning in provinces will have to

be developed that enable the support of this inclusive education system (Department of Education, 1997:87).

Within this context I will now elaborate on my understanding of an ecosystemic approach for educational psychological support towards learners with special educational needs. This elaboration will include a review of literature on an ecosystemic approach to psychological support, the issue of engaging the family in the process of support and specific elements of support from a developmental ecosystemic approach to special need.

3.3.2 AN ECOSYSTEMIC APPROACH TO EDUCATIONAL PSYCHOLOGICAL SUPPORT

Psychological support within an ecosystemic framework uses the concept of "adaptation" to refer to the individual's adaptation to environmental demands as well as the influence of the individual on his/her surroundings better to meet his/her needs. To facilitate adaptation from an ecosystemic framework, existing therapeutic techniques are not discarded, but the appropriateness of these techniques is considered for each clinical context. Traditional ways of diagnosis, treatment and etiology are therefore challenged and traditional thought processes are shown to need redefinition (Auerswald, 1973:699-700; Combrinck-Graham, 1987:504-506; Keeney, 1979:118,119; O'Connor, 1977:16; Wilkinson and O'Connor, 1982:986; Combrinck-Graham, 1987:504).

An integrated ecosystemic approach to therapy, including learner and learning support, asks pragmatic questions (sometimes called "band-aid" methods) and aesthetic questions (character rebuilding) and is therefore guided by both orientations. Pragmatic reductionism is indicated when the psychologist argues that therapy must focus on the "presenting problem" and designs support strategies through reducing the phenomena into manageable bits and pieces. The opposite direction demonstrates sensitivity to holism and complexity, an understanding and appreciation of the patterns characterizing therapeutic contexts, and is motivated by aesthetics. Pragmatics within an ecosystemic perspective would focus on the function of healthy and pathological family ecologies as well as art and technique in therapy. Aesthetics would indicate, "all things in nature are complexly, but systemically, interrelated - morally, mentally, and physically". Therapy is described as a journey,

which the client and the psychologist travel. Therapy within an ecosystemic framework therefore is initiated from a position responsive to issues of both pragmatics and aesthetics. Coupling links individuals and other systems to family systems as well as to meta-systems. The aesthetic notion of sacramental experience may be used where Bateson (1975:25) characterizes sacrament as "a technical matter referring to a combination of conscious thought and primary process, that provides a way through which we enact our part in the ecosystem which may be called our 'oneness in the Creation'" or "a complementary relationship between 'self' and the larger system subsuming it" (Keeney & Sprenkle, 1982:10). Whitaker (1979:111,113) aesthetically describes healthy families in terms of a context in which members experience "the creative tension between individuation and belongingness", which implies dialectic between the two levels. Dysfunctional family ecosystems may be described as inflexible role positions that lead to disconnections between various systems such as husband and wife or family and community or an inability of the ecosystem to embody transformations between individual and social relationship levels causing a "stuckness" in or on one level (Bateson, 1972:120; Keeney & Sprenkle, 1982:2-12).

"Respect" for ecosystems assumes that the psychologist and client are artefacts of an interactional pattern or dance that constitutes the whole of an ever-changing and evolving relationship context. From an ecosystemic epistemology neither the psychologist nor the client is manipulating or steering the interactional dance, "although it may sometimes appear that one dancer 'leads' and another 'follows', closer examination shows this to be questionable, since the follower may lead the leader to lead" (Keeney and Sprenkle, 1982:15) and "in my eyes the rock sculpts the sculptor, as much as the sculptor sculpts the rock" (Holt as cited by Bateson, 1972: 249). This interactional dance could be related to postmodernism of which Anderson (1995) asserts that postmodernism refers to a different theoretical direction, where knowledge is socially constructed and knowledge and the knower are interdependent. Alternatives are available to many of the long-held modernism-based assumptions of psychotherapy theory and practice, such as problems and symptoms as dysfunctions and the psychologist as knower and healer. A collaborative language systems approach to therapy indicates that the psychologist is no longer the expert editor of the client's narrative but more like a co-author. A locally co-constructed therapeutic reality is created in which the client and therapist's expertise is combined to create a collaborative therapy, which does not create dysfunctional categories of people.

Anderson (1995:27) describes this collaborative therapy in the following way:

> It discovers, or allows both the client and the therapist to discover, in Anna's words, heroic feelings.

These metaphors of relationship demonstrate the interconnectedness of all parts of any ecosystem, causing "ecological humility" to be a logical outcome of an ecosystemic perspective. "Ecological humility" acknowledges that all feelings, perceptions, or thoughts are a response to a whole situation that is only partially represented in consciousness. There is an awareness of the incompleteness of conscious knowing as part of larger mental systems with diverse levels and the psychologist's role in therapy has more to do with being alive than creating specific outcomes. Efforts to make therapeutic problem solving explicitly conscious may not be adequately coupled to the ecology of which they are part. Language and the continuous amendment of one's linguistic frames may facilitate the ecosystemic attempt to avoid static, dualistic formulations (Keeney and Sprenkle, 1982:15). In this respect Herrigel (1971:82-83) neatly dramatizes the trend of thought:

> You are under an illusion" said the Master after awhile, "if you imagine that even a rough understanding of these dark connections would help you. Labour is blossoming or dancing where the body is not bruised to pleasure soul, or beauty born out of its own despair, nor blear-eyed wisdom out of midnight oil. O chestnut-tree, great-roosted blossomer, is you the leaf, the blossom or the bole? O body swayed is music, O brightening glance, How can we know the dancer from the dance? (WB Yenis). These are processes, which are beyond the reach of understanding. Do not forget that even in Nature there are correspondences which cannot be understood, and yet are so real that we have grown accustomed to them, just as if they could not be any different. I will give you an example, which I have often puzzled over. The spider dances her web without knowing that there are flies that will get caught in it. The fly, dancing nonchalantly on a sunbeam, gets caught in the net without knowing what lies in store. But through both of them "It" dances, and inside and outside are united in this dance. So, too, the archer hits the target without having aimed - more I cannot say".

Maturana, as cited by O'Connor and Ammen (1997:5), further elaborates on the complexity of conscious knowing by identifying living organisms as "autopoietic" or self-defining. In other words, what makes a living organism living is that its way of being in the world is always organized around maintaining its own being. This definition creates an alternative systems theory, which differs from traditional systems theories in the sense that, although individuals in a family create a system of relationships, the autonomy of each individual is still maintained. This implies that the individual experiences and interacts with the world and creates internal meaning as a result. The learner's functioning in the system is only understood if the learner's

individual perception of how his/her needs are met is understood. Clinically this implies that we search for the adaptive meaning of a learner's behaviours "from that child's subject-dependent perspective within his or her current ecosystemic context". Through this assumption a rationale is provided for viewing the individual as the basic systemic unit of the ecosystemic model, although the treatment unit may eventually be the family. The individual learner is viewed as operating in a biological body and as learner engaging in behaviour with his or her world (in interpersonal relationships and representationally through his or her internal working models). Within this model the learner functions individually, in dyadic relationships, family relationships, peer and other social relationships and in the other systems. The meta-systems include the current sociocultural context and the recognition that this context evolves over time and is affected by its history (O'Connor & Ammen, 1997:5,8).

I view O'Connor and Ammen's (1997) model of therapeutic support as particularly useful for the purpose of my study. In the following section I further explore their views. O'Connor and Ammen (1997:5,6) note that intrapsychic and interactional systems are interdependent. The individual interacts with others and uses language to develop meaning systems about his/her experiences, which indicates a "structural coupling with the environment" when it interacts with that environment over time. During interaction there are changes in both the individual and the environment as a result of their reciprocal responses to each other. The result is the emergence of interpersonal (social) systems and an intrapsychic symbolic system in the individual, where the individual develops models of self, others, relationships and the world. Learners are therefore structurally coupled to their interactional systems and to their intrapsychic system. The language-meaning system is created in an interpersonal context, which includes non-verbal, verbal and affective communication. An intrapsychic representational system is created by the interaction through language and may be called an internal working model. A relationship may be described as "the remembered history of previous interactions" and influences present relationships. The individual history is therefore embedded in each participant's intrapsychic model of his or her interactional past, and through this process the present relationship is influenced. Over time we develop the ability to observe our own conceptual systems, which implies the ability to reflect on feelings, thoughts, and experiences. This reflection allows for the creation of other ways of being with others and ourselves. For young learners this reflective process may be facilitated by

concrete or metaphoric representation of their experiences through play (O'Connor and Ammen, 1997:5,6).

Metaphorically, O'Connor and Ammen (1997:5,6) view the other two systems, the biological system and the social system, as situated on either side of the intrapsychic system (Refer to Figure 2 in chapter one). These three systems (the intrapsychic, the biological and the social) are also described as interdependent, and although the biological domain defines the initial constitutional abilities of the learner, development proceeds through the interaction of the learner's internal states (biological and intrapsychic) with each other and with the environment. Deviations from normal development may influence the learner's biological, intrapsychic and interpersonal functioning significantly. O'Connor and Ammen (1997) further note that systems beyond a certain level of complexity cannot be known completely and a portion of the ecosystem is merely selected to develop a working model. To summarize O'Connor and Ammen (997:9) argue that:

> ... children and their behaviour exist within the context of multiple interacting systems, including physical, interpersonal, intrapsychic and metasystemic systems, which change over time. Ecosystemic therapy treatment takes all of these systems into account when conceptualizing the present problem and formulating a treatment plan.

The caregiver-infant attachment becomes a template for the relationship between the psychologist and the learner. Mother and infant engage in reciprocal exchanges and the infant decodes the communicative behaviour in others. Consistent response to the infant's needs is essential and this relationship may be described as an affective communication system. The psychologist attempts to balance the learner's needs with the needs of others in the learner's ecosystem. Behaviour is the learner's attempt at getting his/her needs met and is adaptive "in the moment relative to the child's internal organization, history, and environmental context". Clinically it implies that the psychologist should seek for the adaptive meaning that specific behaviour has for a learner, although the behaviour appears dysfunctional. The learner's reasons for behaving in a particular way are embedded in his/her history of interactions and experience instead of some objective discoverable reality. All stakeholders within systems have their own subject-dependent understanding of a learner's behaviour, which influences their response to the learner. An uncoordinated "caregiver-infant dance" may result in an inability by the learner to self-regulate due

to the learner's experience of a breakdown in mutual regulation (O'Connor & Ammen, 1997: 9-11).

The psychologist attempts to facilitate the resumption of optimal developmental functioning to enable learners to get their needs met consistently and in ways that do not interfere with the needs of others. Through the experiences offered by the psychologist in the context of the relationship and through play, the learner's understanding and meanings are altered and the learner is enabled to engage in alternative problem-solving. The process of experiencing something differently or understanding different possibilities for getting needs met can have a profound influence. Through symbolic play and interpretation the capacity of being reflective and becoming self-conscious is developed, which allows the learner to choose different ways of interacting. The learner then becomes able to choose different ways of behaving within relationships. Due to the dynamic interdependence of all elements, the influence of therapy on one element will have an impact on all the elements in the system. This process therefore provides the rationale for intervening at the internal representational level. The interactional behaviours and internal representations of the psychologist are also part of the clinical system. Continuous consciousness of subject dependence by the psychologist facilitates the adjustment of interactions and interventions to take multiple perspectives into account (O'Connor and Ammen, 1997:12). This model of therapeutic support as process of support is described as ecosystemic play therapy and summarized as follows:

> In conclusion Ecosystemic Play Therapy can be seen as an integrative theory incorporating developmental (individual and family) systemic, contextual and representational (intrapsychic) variables from the perspective of the child's functioning in his or her ecosystemic world (O'Connor and Ammen, 1997:13).

During this process of facilitating the resumption of optimal developmental functioning for a learner, the psychologist plays a role in the promotion of general mental health. The delivery or structure and organization of support for mental health form a part of the human ecosystem. Mental health professionals such as psychologists have commitments to the individual and to the community as a whole. The mental health system is constrained by responsibilities within the overall community. For effective mental health support the limitations of the mental health organizations need to be realistically assessed and the role of mental health organizations within the meta-

system needs to be understood within a systems context. Under the Mental Health Act of 1973, no distinction is made between intellectual disability and mental illness. This Act is under revision and it is argued that as intellectual disability is no longer considered an illness, it should no longer be covered by the Act. Since the publication of Perspectives on Mental Handicap (Foster et al, 1997:120) changes directed at equity have been initiated, but many needs have still not been addressed and a strategic plan is required for the future (Foster, Freeman & Pillay, 1997:120; Holden, 1972:413-415; Wilkinson & O'Connor, 1982:989).

The discussion presented above is in line with the vision of the Department of Education (1997:54) as part of the practical strategies for transforming the system. Continuous educational campaigns within communities would be pursued to challenge discrimination within the South African context. Through an ecosystemic approach barriers to learning, development and support, placed within the context of general education and transformation initiatives, would influence education as a whole. Future assessment and consultation procedures for accommodating a learner in the most enabling environment would be conducted within the context of a center-of-learning based team. During the transition phase specialised centers of learning would play a role in facilitating other centers to develop their capacity to provide an appropriate learning environment. To facilitate suitable support for the needs of learners, the ability to address diversity and prevent barriers needed to be structured as an integral part of the ecosystem (Department of Education, 1997:55,57,58).

> Mental health, therefore, is defined as a congruent relationship between person and surrounding environments or systems. The mentally healthy person interacts with an environment in which the requirements and resources are congruent with the needs and capabilities of the individual (Wilkinson and O'Connor, 1982:986).

3.3.3 ENGAGING THE FAMILY

The Department of Education (1997:16-29) notes that fear and ignorance of special needs and specifically disabilities create barriers to learning for learners with disabilities. In South Africa many parents find it difficult to accept a learner with a disability and in some communities the mother or family is often isolated from the community. Traditional and religious beliefs and a lack of awareness contribute to negative attitudes toward disability. Adult learners with disabilities are also not valued (Department of Education, 1997).

To facilitate the process of acceptance of special needs within the family, the family could be engaged in therapeutic support. Weber and Levine (1995:47-49) associate this process with a therapeutic overture where all the primary themes of the psychologist and the family are played. The psychologist-family system is created, and engaging the family is viewed as a circular process where gathering information creates opportunities for change. The psychologist needs to demonstrate personal authority, connect personally with family members, articulate a vision of the therapeutic process and take clearly defined "I" positions from a composed presence. A partnership needs to be established with the family within a context of collaboration. The role of "systems consultant" for the psychologist facilitates the acceptance by families of more responsibility and recognition of the resources within the family. A learning organization needs to be created, which implies a community of learners, including both psychologist and family members, where the notion of "collective learning" is central to the process and keeps all parties involved. The therapist-family collaborative process also models the collaboration one hopes the family will develop among its members. The engagement process also involves creating a "holding environment" which implies a safe, reliable therapeutic space within which change and growth are facilitated. Therapeutic support is provided within a complex relational matrix where the internal worlds of all the participants are included. This provides a space for family members and the psychologist to be open with their thoughts and feelings. When this occurs, engagement is accomplished and therapeutic change can occur (Weber & Levine, 1995:47-49).

3.3.4 A DEVELOPMENTAL ECOSYSTEM APPROACH TO PSYCHOLOGICAL SUPPORT WITHIN INCLUSIVE EDUCATION

In my opinion Wood (1995) has made a valuable contribution to the literature on terminal illness, which can be applied to special needs in general. In this section I will apply Wood's (1995) views to the concept of intellectual disability. Wood (1995:437-440) argues that a special need may challenge families emotionally and there may be times when caregivers suffer from demoralization. The psychologist may play a role in promoting the well being of these learners and families. Early intervention within an ecosystemic framework[5] may minimize the impact of the disability and facilitate the prevention of maladaptive response patterns to the disability. Facilitating

5 Also called biopsychosocial as described in chapter one page 24

ecosystemic balance between the management of the disability and the quality of life of the learner and family could be part of the supportive role of the psychologist. Issues such as the demands for managing the disability, emotional and financial stress and time demands on the family or support system need to be considered. The assumption is made that the well-being of the learner depends on the dynamic balance between the learner's physical, psychological functioning and family-social functioning. During childhood and adolescence ecosystemic imbalances can arrest or delay development. Patterns optimizing the learner's medical management and psychosocial functioning may impair aspects of the family functioning. For example a marriage can be neglected, or siblings needs may remain unaddressed (Wood, 1995:437-440).

Wood (1995:441) also asserts that the family is influential in facilitating ecosystemic balance. The development of self-concept, personal identity and the degree of interpersonal involvement are processes that may be observed. Individuation includes developing a balance between perceptions of autonomy and interpersonal involvement. Isolation of a learner may be an indication of rigid interpersonal boundaries, whereas an extreme level of involvement may indicate diffuse boundaries. A biological condition creates a setting where learners often need to surrender control over their own bodies, which may hinder the development of autonomy and could contribute to identity confusion where the learner identifies with his/her biological condition, rather than with other ethnic or cultural characteristics. Parental and sibling roles may also become blurred and siblings may act as parents toward the learner with a disability, depriving the learner and the siblings of normal sibling relationships. The family's identity may suffer due to the level of intrafamily involvement. If the learner with the disability is the primary focus in the family, the family identity may become confused with the disability and these families are at risk of developing maladaptive patterns of functioning, which may influence the learner's development. These patterns call for support from the psychologist to facilitate the decrease in proximity or responsively and to support generational hierarchy (Wood, 1995:441).

The psychologist may facilitate the process by enhancing a balance between firm limit setting, nurturance and the expectation of normal functioning for the learner with a disability. The degree with which individuals in the family respond to emotionally charged events and to one another indicates responsivity. Proximity implies the

extent to which various domains of interaction are shared by family members, such as personal space, private information, emotions and decisions. High proximity is indicated in families who share much interaction. Generational hierarchy would indicate the level of the parents' control of their children through balancing nurturance and limits. Reactivity indicates the degree of "differentiation of self". Disability may organize families although families differ widely in their proximity hierarchy and responsivity levels. Triangulation of the learner with a disability may occur between the learner and one parent against the other parent. Dysfunctional parental relationships have been associated with such triangulation pressures. The extended family could provide support and guidance or be a hindrance to the nuclear family depending on their beliefs about the disability. The psychologist could facilitate the process by including family members in discussions, encouraging members to share information and providing guidance in effective ways to support the nuclear family. The psychologist also needs to maintain a perspective on the costs for a family with a disability, because of the financial implications of health care, which could produce stress and disrupt family well-being (Wood, 1995:452).

The family, the school, the peer group, and the health care system constitute critical social systems for the learner with a disability. Wood (1995) asserts that the way these systems respond to the learner may enhance or undermine physical and psychosocial functioning and development, which implies the importance of adaptive coordination among these social systems. During the process of development, the learner needs to become increasingly responsible for the management of his/her disability tending towards taking full responsibility as far as possible. Adolescents need the opportunity to demonstrate that they can manage their disability responsibly. A new balance of autonomy may need to be established during adolescence, but this may present difficulties as families are often accustomed to intense involvement in the life of the learner with a disability (Wood, 1995:442).

Where parents have been divorced, separated or remarried, both parents need to be educated about the medical and psychosocial aspects of their learner's disability, with permission from the custodial parent. The other parent should be involved in as many interactions as appropriate. Where conflict between the divorced parents is affecting the learner, the psychologist should intervene and challenge the systems to check impairment of the learner's development and well-being (Wood, 1995:452).

Hoffman (1995:461-473) states that life stresses, such as loss through death, divorce, economic hardship, the birth of a sibling or natural transitions, need to be anticipated by the psychologist. Support at the psychosocial level can prevent difficulties in the management of a disability. Some families may become under-involved with the learner with a disability, due to a preoccupation with other life events. The learner's physical or psychosocial well-being may be neglected through missed appointments and failure to monitor educational or physical issues. The psychologist in collaboration with the health care system may provide expertise in identifying opportunities for preventative support. Families often struggle to survive in a complex world and the psychologist, as a researcher needs to facilitate a systemic understanding of change within the multiple systems in which change occurs. Changes in families also need to be understood in terms of change in work systems and in the larger contexts in which they are embedded. Issues such as the expansion of the roles of women, easily obtainable birth control, increases in the number of dual-earner families, changes in living arrangements, long distance, diverse family structures, cultural diversity, changes in management styles of companies, changes in technology and the threat to steady employment need to be considered. An unstable economic environment places great strain on families and their sense of economic security. Inherited patterns of family behaviour may also influence responses to change. Changes in work and family structure may also have an effect on the marital relationship, often requiring a redefinition of marital relationships and roles. The patterns of reaction by the learner with a disability also influence the reaction of the family on the learner. The birth of a child brings changes to the entire family system and the family must reorganize itself. Parents who are extremely stressed by attempting to fulfil the multiple and often conflicting roles of work and family may unintentionally draw their children into their deliberations (Hoffman, 1995:461-473).

Illness and the early death of the learner with the disability may be predictable due to the particular characteristics of some disabilities. Wood (1995:453) says that the response of each system to the learner's illness and death will affect the other systems and their level of adaptive functioning. Young children who are dying are most frightened of the separation aspect and may need specific support during this time. Individuals and families will also need individualised support as well as guidance in maintaining open communication, and providing one another with support. The psychologist may also need to play a role with decisions about life

support, medical interventions and about hospitalization versus home care. The psychologist may need to be a strong advocate for the family in negotiating various issues. After the death of a child the family may need follow-up visits to facilitate healing closure with the support system. According to Wood (1995:453), the psychologist should support the learner and family by remaining involved and assisting members of the health-care system as well (Wood, 1995:453).

The degree of proximity of the wider social systems is embedded in ethno-cultural contexts and also influences psychosocial well-being. Imbalance between the systems could, for instance, result in too little sharing of basic information about the disability (too little proximity) or insufficient assumption of responsibility by responsible adults (weak hierarchy). Schools could over-react to the disability and take too much control (too much proximity and too strong hierarchy). The discomfort of a peer group may result in rejection of the learner, which indicates under-responsivity, or unnatural fascination with the learner, indicating over-responsivity. The health care system may also be too responsive and over-mediate, which could impair self-management of all the aspects of the disability, or the learner may become triangulated between the school and health care systems, due to incompatible demands by or on the systems. The psychologist could monitor balance within and among these systems and adaptive coordination is especially promoted and sustained by preventative support. Individual members may need brief individual support at times or couples sessions may be indicated. Effective support is facilitated through the flexibility of the psychologist and collaboration between all the systems. An ongoing collaborative relationship of mutual trust between the psychologist and the primary health care system and a framework, which includes biological, psychological and social considerations, makes for effective support (Wood, 1995:442-450).

Fine (1995:481,482) notes that the school plays an important role in the life of the learner and each school system has its own unique structure. The learner with a disability may have difficulties in only one setting or both. The psychologist needs to make sense of the contexts and provide adequate support. Fine (1995) further proposes a collaborative consultation framework from an ecosystemic perspective which allows for the "confluence of both family systems and ecological theory and practice". The psychologist needs to become familiar with the culture of the school. There is a shift away from the model where the "problem" is believed to reside within

the learner. Imbalance may be observed in the ecosystem that is defined by the learner and collaboration between all parties may restore the balance. The context of the learner is recognized and the psychologist as consultant collaborates with the involved professionals and educators to coordinate their thinking and actions. The way a problem is defined by educators or professionals may perpetuate the issue and the psychologist could then mediate the process towards effective problem-solving (Fine, 1995:481,482).

Wynne, McDaniel and Weber, 1986:377-378) further elaborate on the psychologist's role as consultant:

> One very important task of the consultant is to convene the system in such a way that the different and often contradictory views of "reality" are allowed to merge into some integrated, working whole. Bringing the disparate parts into a whole not only fosters greater communication and efficiency, but also minimizes escalating battles and multiplies strengths. Convening members of the larger treatment system may be the consultant's most important task.

The concept "therapy" would imply the support to the family within the family-based clinical situation, and the concept "consultation" would indicate support in other non-clinical contexts, such as the collaboration with the school. Collaborative meetings may be defined in many ways and could include parents, the learner, teachers and/or other educators. As the school and family collaborate more effectively the need for direct clinical support declines. The psychologist needs to be sensitive to "turf" and demonstrate "persistence, flexibility, strategic thinking, and effective interpersonal skills" (Fine, 1995:483,482).

The efforts and concerns of educators should be appreciated with a non-judgmental and understanding attitude. In the context of problem behaviour multiple factors need to be considered, including the way the problem is defined, identification of various role-players, differences in the learner's behaviour in different settings and the history of family-school interaction. An ecosystemic approach may have implications beyond the immediate context and provoke additional change in the ecosystem with positive outcomes (Fine, 1995:483,482; Fisher, 1986:344). This model could be useful in South Africa as it coincides with the vision of the Department of Education (1997):

> Support services should move away from only supporting individual learners to supporting educators and the system so that they can recognise and respond appropriately to the needs of all learners and thereby promote effective learning. In order for this to happen, the ability to address diversity and minimise, remove and prevent barriers to (Department of Education, 1997:58).

In this regard Fine (1995:486) also notes that systems can be complex and some systems may appear functional, but when stress is induced the system may not function effectively. To support the family and school systems collaborative problem-solving behaviours need to be encouraged, which may involve reform in definitions of problems. The psychologist needs to be aware of recursive patterns and appreciate that different individuals hold different perceptions. The involvement of many mesosystem members should be encouraged and the psychologist should value the various perceptions and previous interventions from a circular posture. Important information will be revealed through this process. Causality also needs to be viewed from a circular perspective as this avoids blaming individuals. A circular perspective to causality facilitates the examination of patterns of interaction. Educators may demonstrate linear, causal reductionism to simplify problems such as the notion that a learner performs poorly at school because he/she comes from a dysfunctional home. The psychologist should explore the purpose that particular behaviour of a learner serves within the system as behaviour may disguise feelings of frustration or stupidity. Understanding the behaviour could then be facilitated within the collaborative group. Hidden agendas need to be identified as they may undermine a support programme and the psychologist must guard against being triangulated. Through effective mediation by the psychologist, conflict between the family and school systems can consequently be resolved (Fine, 1995:486).

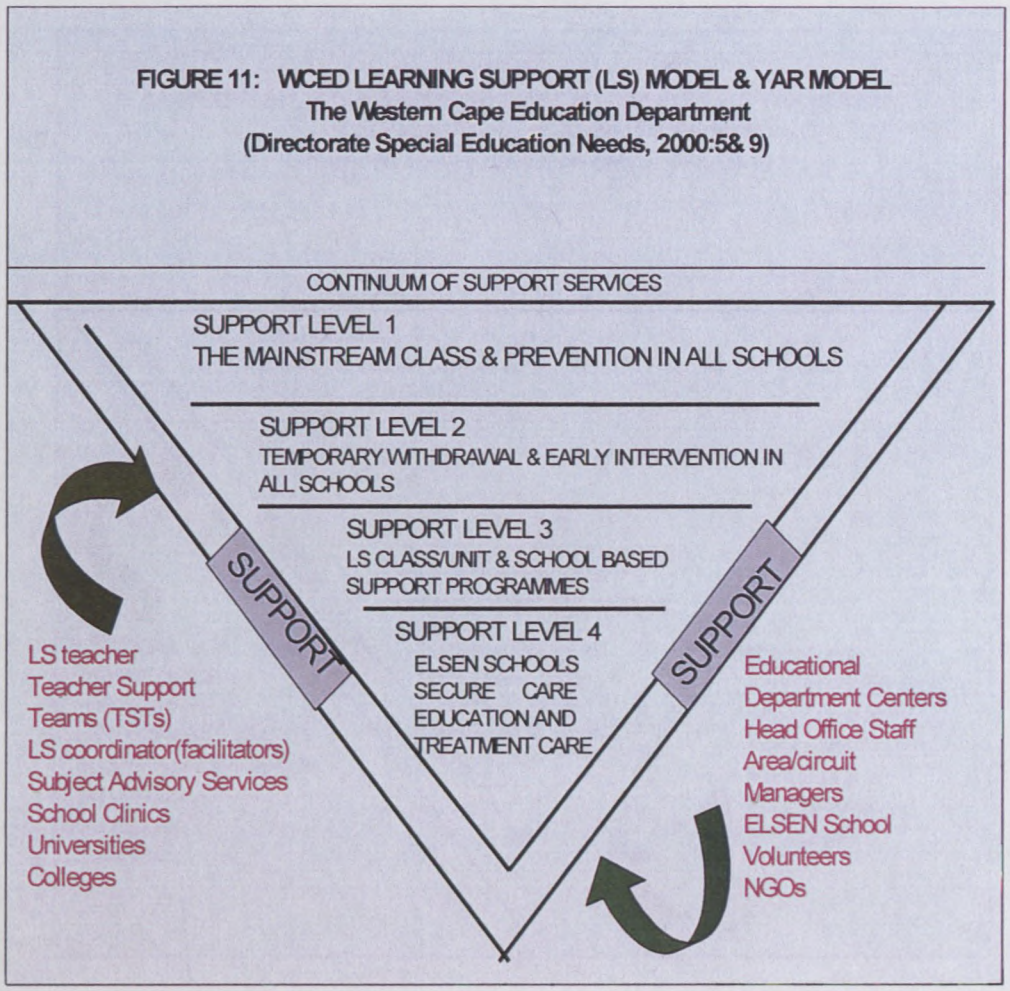
Fine (1995) also suggests that "joining" the system creates strategic opportunities for the consultant. As the consultant interacts with both systems the risk will be there that he is seen as a representative of, or an advocate for, one of these systems. The psychologist needs to establish an image of respect for the integrity of both systems and concern with the best interests of the child. Joining the system takes the place of the concept of rapport in individual therapy and describes an attitude. Joining the mesosystem requires that the psychologist uses tempo, choice of phrases, metaphors and expression of positive regard for each subsystem to encourage others to see him or her as an "insider". Joining places the psychologist in a more involved role (Fine, 1995:487).

In South Africa the psychologist should be reasonably informed about the local systems he/she will be entering and joining. The psychologist also needs familiarity with the laws affecting services to learners with identified special needs. Parents should be supported assertively to explore available services within the school district. Within the context of the recommendations made by the Department of Education (1997:50) strategies such as flexibility in teaching and learning styles, the use of teaching aids, team work, active support for community involvement and acknowledgement of environmental factors influencing learner development are encouraged. Parents need to be guided on inclusive education with the provision of fair predictions. Information on placement options should be provided and issues such as school transport should be explored with parents. Flexibility of placement is important and placement should always have the possibility of movement preferably towards the mainstream. At present only a few learners with severe disabilities have been accommodated in ordinary schools in South Africa. The contributions of NGOs are viewed as critical in overcoming barriers to learning. It is expected that eventually only a small percentage of learners would require accommodation in specialised learning contexts in South Africa. There should be collaboration with center-of-learning-based teams and community-based resources, and support services need to be included. During transition phases there should be collaboration with specialised centers of learning in preparing learners for inclusion and extra-curricular activities. Early Childhood Development Programmes, promoting community events for inclusive education and a preventative and developmental approach to support, should be included (Donald et al, 1997:236; Department of Education, 1997:24,50,57,87; Fine, 1995:489; Petley, 1994; Selikowitz, 1990).

The Western Cape Department of Education (Directorate Special Education Needs, 2000:1-3) has developed a model for learners with special educational needs (LSEN) to ensure that all learners are treated and supported equally. This model could also be adopted by other regions. The function of the Directorate Special Education Needs is to support all learners with special needs. Through this model an effort is made to accommodate learners in the mainstream, which implies the regular educator will have to be trained to accommodate learners with special educational needs. The principle of "education in the least restrictive environment" is applied. The support provided to these educators will be essential and the intention is to establish teacher support teams (TSTs) at each school. At Support Level two learners can be

withdrawn from the class by the learning support teacher for individual or group support. At Support Level Three an ELSEN (Education for learners with special educational needs) class can be established at a school if the first two levels do not provide for the needs of the learner. This class will replace existing special classes. Separate ELSEN schools will make provision for learners who cannot make progress in any of the above options. The aim of this model is to provide equal opportunities for all learners within an inclusive system. A new model for Youth at Risk was based on the above ELSEN model. For the purpose of this discussion the two models were integrated in Figure 11 (Directorate Special Education Needs, 2000:5-7).

FIGURE 11: WCED LEARNING SUPPORT (LS) MODEL & YAR MODEL
The Western Cape Education Department
(Directorate Special Education Needs, 2000:5& 9)



Umbreit and Blair (1996) assert that curricular variables need to be related to the occurrence or non-occurrence of problem behaviour functionally. Behaviour is improved when the learner is engaged in preferred activities, provided with choice and receives attention frequently while engaging in appropriate actions. This backs up research on functional assessment and assessment-based support. The psychologist could help educators towards adopting a multi-dimensional role of

educator, researcher, leader, manager, supporter, and conflict manager. Educators need to be motivated to adopt new teaching styles and methodologies as well as empowered to offer cognitive education and early cognitive enrichment. Educators need to develop faith in themselves, courage to act and understanding of the classroom environment. According to the literature, constructivist roots with whole language, cognitive strategies instruction, cognitively guided instruction, scaffolded instruction and making accommodation for learners should be included in this process. The focus should be on cooperative education and instructional approaches from a multiple intelligences theory. Multilevel instruction and planning for outcomes, practical strategies for communication and peer involvement should be included. Educators must be motivated to explore the multitude of educational methodologies to facilitate meeting individual needs and to become lifelong learners, reflective practitioners and researchers within the context of outcomes based education. There are various models available such Life-Style Planning, McGill Action Planning System and COACH (Bennet & Williams, 1992:74; Boschee & Baron, 1994:193; Botha, 1996:233; Brause & Mayher, 1991:x; Donald et al, 1997:130; Switlick & Stone, 1997:200; Williamson, 1992:135; Brause & Mayher, 1991:21; Malan, 1996:252-259; McNamara & Moreton, 1995:21; Naudé, 1996:161; Sedgewick, 1992; Slabbert, 1996:281; Wadsworth, 1992:60; Wiechers, 1996:180-183; Scott, 1996:237; Skuy, 1996:187,188; Hearne & Stone,1995:447).

The psychologist could also play a role in evaluating various educational programmes to facilitate the integration of cognitive education and metacognitive aspects of self-regulation. These elements should become an integral part of schooling, and the constructive nature of cognitive functions required by formal schooling should be acknowledged. The psychologist could also emphasize the centrality of a human mediator in education and encourage the enhancement of every learner's learning potential (Greenberg, Coleman & Rankin, 1993; Kozulin & Presseisen, 1995; Rambusch, 1995; Johnson, Test & Algozzine, 1995).

Within the context of the literature, I would therefore disagree that the educational psychologist should advocate the adoption of a systems approach to support learners with special needs nationally and regionally and specific support should be provided to rural communities. Educators should be trained to provide a holistic educational experience within the context of health-promoting schools and whole school development. The educator is also viewed as a facilitator and an emphasis is placed

on life skills. Learners need to be involved and empowered in counselling roles. Peer co-counselling, engaging with parents and the community and using community resources would facilitate this process. Vocational guidance should be provided and the expansion of this service to dropouts and street children should be facilitated. There should be emphasis on strengths and a sense of hopelessness should be countered (Donald et al, 1997:112-114,168; Sebastian & McDonnell, 1995; Unesco, 1993:158; Van der Merwe, 1996:287). The above argument is in line with the recommendations from the Department of Education (1997:97):

> The roles and functions of education support personnel should be transformed in line with the principles in this document. This would include providing support to all centers of learning (facilitating institutional and curriculum development), supporting educators and parents in assessment and developing appropriate interventions, developing preventative and promotive programmes (e.g. health-promoting strategies) and addressing barriers to learning and development through appropriate interventions where the center-of-learning-based teams have not been able to provide solutions.
>
> Education support personnel should be provided with the necessary reorientation, pre- and in-service training to facilitate the shift in roles and functions outlined above (Department of Education, 1997:97).
> Educators in the mainstream education system have in the past not been trained to respond to 'special needs, such as disabilities...The lack of training to equip educators to deal with diversity has not only disadvantaged many learners but has often also left educators feeling inadequate (Department of Education, 1997:87).

The Department of Education (1997:89-91,96) further notes that in the context of specialist agencies and referral possibilities Education Support Co-coordinators will contribute to support at all levels of the ecosystem. They will facilitate policy development as well as its management and implementation. This would include national and provincial level, regional level, community level and center-of-learning level. Recommendations are also made to address the discriminatory employment practices against staff with disabilities.

I would further suggest that support to learners with special educational needs also be provided from an approach of integrated therapies as described by O'Toole and Switlick (1997:203): "Integrated therapies focus on the inclusion of related service providers into the comprehensive educational plan". This approach facilitates a paradigm shift towards shared ownership and commitment by professionals to educate all learners. Therapies such as physical therapy, occupational therapy, speech/language therapy, school health services, school psychological services and the specialties of other consultants are some of the possibilities. A trans-disciplinary model could be applied which is characterized by information sharing across

traditional discipline boundaries. The curriculum is learner-centered and integrates hands-on experiences. Integrating therapy is an evolutionary process and the psychologist could play a role in informing educators and professionals with a view to its acceptance (O'Toole and Switlick, 1997:213; Rainforth *et al.*, 1992; Smith, 1990).

If an ecosystemic framework is adopted for the support of learners with special needs, each professional is likely to develop his/her own ecosystemic perspective through a creative blending of concept and techniques. An ecosystemic perspective is a frame of mind instead of a specific methodology. From this perspective the systemic nature of relationships among people is acknowledged and the circular nature of causality encourages the examination of patterns and sequences of behaviour (Fine,1995). The significance of observation is emphasized and assessment is viewed as a dynamic and interactive process. Multiple data sources and the appreciation of the subjectivity of people's experiences are important. Through the consultative role collaboration between the parents, learner and educators is facilitated. The psychologist often needs to assume an active and muti-faceted role with a sensitivity cultural values, educational philosophy and policies. The goal in support of the learner with special educational needs would include facilitating healthy family-school interaction in the best interest of the learner (Fine, 1995:492,493).

The role of the psychologist within the South African context would presume a continuously expanding knowledge base of psychology and its sub-disciplines as well as that of related disciplines (Foxcroft, 1998a). As the mental health needs of children, adolescents, and their families are under-served; the comprehensive scope of the role of the psychologist would have implications for the training of psychologists. The knowledge base of the psychologist would have to include knowledge of life-span development psychology and psychopathology, issues of diversity and the role of multiple disciplines. Child, adolescent and family assessment methods and intervention strategies, research methods, systems evaluation and professional ethical issues pertaining to children, adolescents and families, would also be important. There should also be an emphasis on service delivery systems in prevention, family support and health promotion and social issues affecting children, adolescents and families (Roberts *et al*, 1998:293-296).

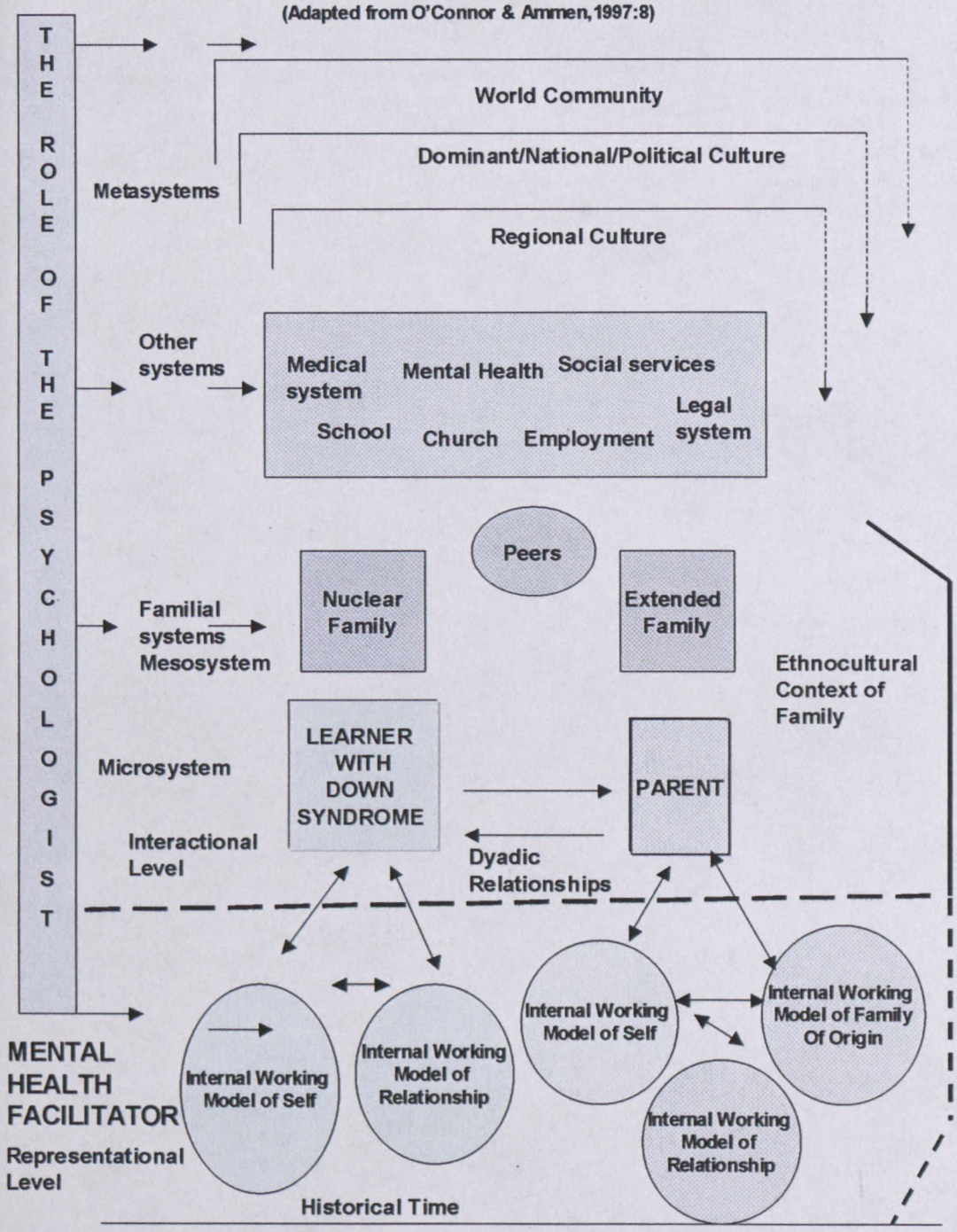
Kirsten (1998:18-24) identifies core functions that the educational psychologist needs

to perform within the South African context. These functions summarize the argument of this section where the role of the psychologist in support of learners with special needs is presented as promoting mental health. Figure 12 provides a graphic presentation of the role of the psychologist within the ecosystem as described in this chapter. The function as collaborative consultant would include primary and secondary prevention, whole-school development and the establishment of support networks. This implies a holistic approach to systems change and includes the argument that learning and development are integrated experiences within a specific context. This process facilitates joint ownership of outcomes. Within the challenges of South Africa's unique situation, the psychologist has a choice to be part of the problem or part of the solution. Facilitating solutions would require an assertive positioning of the profession and the advocacy for larger systems to be more responsive to psychosocial issues and the promotion of wellness centers. Individuals need to feel invested in support programmes and all stakeholders should be involved in collaborative decision making, which results in a sense of shared ownership of the process. When the psychologist assumes a collaborative posture it is a way of "joining" with educators and supporting the parents in a participatory decision-making role (Fine, 1995:491).

The Department of Education (1997:94) also suggests that learners with special needs should be weighted, which should then influence the number of psychologists appointed. Education support personnel are limited and need to be utilised effectively. Instructional support teams (IST's) as pre-referral intervention groups that link all school resources are proposed better to meet the needs of learners. This programme strives to assure that educational services are used effectively and to provide peer support. It embraces problem-solving assistance to educators through a team-based structure. Parents need to be accepted as experts in more than one aspect of their child's life and therefore need to assume equal partnership. Educators need to be reflexive and must not become judgmental if parents are less involved. Success of the learner with special needs would eventually also contribute to the positive atmosphere of the school (Kowaleski, Tucker & Stevens, 1996; Tetreau, 1995).

FIGURE 12: THE ROLE OF THE EDUCATIONAL PSYCHOLOGIST WITHIN AN ECOSYSTEMIC FRAMEWORK

(Adapted from O'Connor & Ammen, 1997:8)



To strengthen the psychologist's role as mental health facilitator, the function of reflective practitioner becomes essential. This function includes action research and facilitates a self-reflective process of critical questioning through scientifically responsible means. This promotes the self-construction of the learning process and a systemic approach to problem-solving and professional development (Kirsten, 1998:20). Swart (1994:126) indicates that a reflective practitioner embraces

continuous development of a personal theory through systematic integration of practical experience, constructed knowledge and reflection within the context of a values framework. Research creates opportunities to mediate change toward an ecosystemic framework within all the levels of the ecosystem. This would imply second-order changes where norms are altered and may require radical changes in the role of the psychologist. The psychologist could therefore make a valuable contribution from an ecosystemic perspective in supporting systems directed toward transformation (Hoffman, 1995:475).

To conclude this section the discussion will be related to the broader context of medical and mental health systems. Kirsten (1998:36) asserts that the function of the psychologist in assessment and evaluation would include facilitating teacher-support teams. In the prescriptive function the psychologist would provide assistance in the planning and management of individual programmes for learners. Management of cases in collaboration with the coordinator of special needs and the coordination of resources, as well as the organisation of placement, would also be included. Direct service delivery functions, such as family, individual and group therapy as well as educational and life skill programmes for parents, teachers and learners, remain essential to the role of the psychologist. Except for the general administrative functions of the psychologist, the administrative function would also imply the interpretation and review of policy documents, contributions to policy making and the coordination of trans-disciplinary meetings with teacher support teams. In the area of teacher development, in-service training and staff development would be arranged, together with effective classroom management, curriculum development and the support of teachers' needs. Mediation and networking are also essential to the role of the psychologist and would include communicating information through workshops and pamphlets in the community. Partnerships between psychologists and primary-care support systems are essential. The lack of unifying models of illness and support to facilitate the bridging of medical and psychosocial diagnosis and treatment, poses a challenge to psychologists. Currently the language and thought of these paradigms vary, but through effective mediation directed towards an integrated model they may become compatible. Medical models focus on individual aspects of health and disorder but mostly fail in providing a framework for understanding family and sociocultural aspects of illness.

Continuous clinical training and research collaboration between the psychosocial and

medical professions within a context of trust and respect for each other's models would be essential to facilitate reform (Kirsten, 1998:18-24). This process could create a bridge "between the medical and mental health systems, thus beginning an evolution toward integrated, cost-effective and humane health care" (Wood, 1995:452).

3.4 THE LEARNER WITH DOWN SYNDROME

I contend that the role of the educational psychologist from an ecosystemic framework as described in this chapter could be applicable for the learner with Down syndrome. I include a review on Down syndrome in this chapter as I view an extensive knowledge of the needs of learners with Down syndrome as essential to providing adequate support for the learner with Down syndrome. From the ecosystemic framework of my study, I also suggest that the educational psychologist should focus on facilitating the holistic development of the learner with Down syndrome. Where I refer to issues educators or other individuals need to know or support, I also imply that the educational psychologist could take on those needs.

I would like to introduce this part of the review of the literature from the parents' point of view as, according to Cunningham (1996), parents have dreams and are optimistic when they expect a baby but when they are told that their baby has Down syndrome they are often shocked and react with disbelief which may be followed by a range of feelings. These are viewed as normal reactions and it is important to recognize the reactions and their consequences. But Cunningham (1996:14) also notes that these feelings may change in time: Outlining a mother's experience, he writes:

> About the second week after having him home I told myself to forget all about the Down syndrome and treat him like any child. I sort of shrugged my shoulders and took each day as it came. If a problem arose, I sorted it out, but I thought there was no point sitting and worrying about problems that might never happen (Cunningham, 1996:14).

To understand and support parents in this process and to understand the individual with Down syndrome in my role as a psychologist, I need to explore the issues around the "syndrome". In terms of the classification of special needs, the position of the learner with Down syndrome within the medical model is indicated in Figure 10 in

this chapter. Down syndrome occurs in all parts of the world and is not restricted to one race, culture, social class or historical period. Currently there are many publications available on Down syndrome. Due to the bulk of the literature considered in this study, a selection of research findings has been summarized according to each specific system to establish the context for the role that an educational psychologist could fulfil to further the development of the learner with Down syndrome (Cunningham, 1996:14).

3.4.1 THE MICROSYSTEM

I chose to evaluate the possible role of the psychologist in the development of the learner with Down syndrome (the microsystem) from a developmental perspective, which I then integrated within an ecosystemic framework. Viewing the individual with Down syndrome from a developmental perspective includes the description, explanation and modification (optimization) of intra-individual change in behaviour and inter-individual differences in such changes. A developmental perspective has evolved on the whole learner and the environment (temporal and ecological aspects) in which the child develops. From this perspective it appears that individuals with Down syndrome do not constitute a homogenous group and they have important developmental similarities with other learners, but also important differences in development. The issue arising from a developmental perspective is the "similar sequence hypothesis" applied to universal stages of development, which prompts the question: "Do learners with Down syndrome proceed through normal development at a slower rate?" A developmental perspective could also provide clues to the processes by which one can best support learners with Down syndrome (Hodapp & Zigler, 1990: 1-24; Baltes et al, 1977:224; Cicchetti & Beeghly, 1990:1,30).

3.4.1.1 The Biological System

A summarised review of Cunningham (1996) integrated with other literature sources attributes the following biological features to the learner with Down syndrome:

- **Diagnosis**: Down syndrome is present only when an individual has a collection of the most common signs and the extra chromosome. The diagnosis does not predict the development or imply a ceiling on progress (Cunningham, 1996:57-86; Bird & Buckly, 1994:7).

- **The most common signs of Down syndrome include the following**: The eyes have an upward slant, the eye slit is often narrow and short and small white patches can sometimes be seen on the edge of the iris of some babies. The learner's face has a flat appearance and the head is usually smaller than average with the back of the head seeming to be flattened. The ears appear to be small and are usually low-set. The mouth of the baby seems small and the lips thin. The tongue shows a tendency to stick out due to smaller mouth space. In the young baby the neck often appears slightly short as well as the legs and arms in relationship to the length of the torso. The feet of the learner with Down syndrome also tend to be broad and the toes short. Most characteristics observed in the infant will persist in later life and due to the interactive nature of the body; many characteristics need to be discussed across systems (Cunningham, 1996:87-126; Bird & Buckly, 1994:5).

- **The skull and face:** Many facial features are due to the deficient growth and development of the skull and poor development of sinuses (Cunningham, 1996:94).

- **Upper airway obstruction:** Tonsils and adenoids can be large and may cause difficulties in breathing (Cunningham, 1996:94).

- **Hearing:** Ear chambers and canals are small and 80-90% of the learners with Down syndrome will have some hearing loss at some stage (Cunningham, 1996:94).

- **Growth:** These learners tend to look much younger than their age due to the underdevelopment of the skull (Cunningham, 1996:95).

- **Weight:** The young baby weighs less than other babies and when growing older to adulthood, mild to moderate obesity may occur. Learners with Down syndrome are often passive eaters, preferring softer food (Cunningham, 1996:98; Prasher, 1994:64).

- **Tooth development:** Teeth appear later and are often small; less tooth decay is observed with learners with Down syndrome. Older people may suffer from gum disorders (Cunningham, 1996:100).

- **Posture and movement:** Learners with Down syndrome have a characteristic posture, but good posture can be developed. Some aspects of their motor performance can improve with practice of the task. These learners often have a history of failure. If they are made to believe that they can succeed they overcome these limitations. Because of their ability to improve their motor performance quickly and at a high level, individuals with Down syndrome might be good candidates for jobs that require these abilities such as assembly line positions that require accuracy, speed and repetition (Almeida, Corcos & Latash, 1994; Cunningham, 1996:101).

- **Skeleton:** The characteristic differences of individuals with Down syndrome from other individuals are the absence of a twelfth rib, smaller pelvis and less developed bones, but this should not affect posture and stance to any great extent. Dislocation of the hip happens more frequently than normal and the joint (atlanto-axial joint) of the top two vertebrae (atlas and axis) has increased flexibility (Cunningham, 1996:102).

- **The skin and hair:** Learners with Down syndrome have distinctive creases on their hands and feet, and their skin appears to have less elasticity and may appear firm, dry and rough. Hairgrowth is sometimes fine and sparse (Cunningham, 1996:104).

- **The digestive system:** The majority of learners with Down syndrome have a normal system. Some individuals have blockages in the tube leading to the stomach and occasionally the large bowel will be abnormal or some strain with bowel movements may occur (Cunningham, 1996:106; Selikowitz, 1990:43-88; Hestnes, Sand & Fostad, 1991).

- **Sensitivity and arousal:** There are reports that learners with Down syndrome are less sensitive to touch, pain, heat and cold (Cunningham, 1996:112).

- **Sensory coordination and sensor motor development:** The brain of the infant with Down syndrome shows evidence of arrest in both neurogenesis and synaptogenesis with persistence of long neck spines such as is usually seen only in foetal brains. It is documented that Folic acid modulates a number of enzymatic systems (Dunst, 1990:180; Peeters & Lejeune, 1995). The cerebellum

of these learners is reported to be smaller and this could account for poor muscle tone (hypotonia). There is also a tendency for loose-jointedness (hyper flexibility), and the reflexes of learners with Down syndrome tend to be weaker. Research reveals no basic abnormality in the motor-control mechanisms of learners with Down syndrome. Apparent differences in motor behaviour seem to arise from the adaptation of the motor-control system to the basic impairment of decision-making and specific movement-preparation problems. The relationship between motor control and visual proprioception may well be involved in the control of postures that occur earlier in development. Intellectual development may be influenced by earlier motor achievement such as acquisition of postural control. Learners with Down syndrome are delayed in the development of important vocal milestones, rhythmic motor milestones and other motor milestones such as canonical babbling, stepping, standing, sitting, creeping/crawling, rolling and reaching. This suggests that rhythmic behaviours may be internally linked by common neuromuscular underpinnings and that the postural behaviours may be similarly linked (Cobo-Lewis, Oller, Lynch & Levine, 1996; Ellio & Weeks, 1993). There is evidence of impaired spatial representational capacities in several domains such as neurobiological, neuropsychological and behavioural domains, which includes prospagnosia (the inability to recognise individual faces). The lack in the ability to "represent" the external environment may lead to the more generalized retardation observed in people with Down syndrome.

The sensor motor development of infants with Down syndrome is however closer to the normal than different. A strong relationship between sensorimotor functioning and the development of the affective faculties, motivation, and temperament is observed. Establishing confidence in the stability of the external conditions, clear explanations, demonstration and creating a feeling of confidence are a priority for physical therapists and educators. There is a greater prevalence of left-handedness and ambiguous-handedness in learners with Down syndrome (Cicchetti & Beeghly, 1990: 35; Cunningham, 1996:112; Dunst, 1990:224; Latash, Almeida & Corcos, 1993:391-399; Le Clair, Pollock & Elliot, 1993; Lewin, Kohen & Mathew, 1993:675; Uecker, Mangan, Obrzut and Lynn Nadel, 1993:273).

Educators need to know that people with Down syndrome can improve their motor skill performance and that a stimulating inclusive environment, physical activity and therapy play an important role in this process. Regular exercise that

promotes muscle tone and general posture, such as swimming, horseback riding, gymnastics, trampolining and climbing frames, is important. Learners should be allowed to progress at their own pace and their confidence must be built up. Proper eating and chewing habits need to be encouraged, as learners with Down syndrome tend to be passive eaters due to hypotonia. It is clear from the literature that all the knowledge about normal development can be applied in an intervention programme for learners with Down syndrome. Exposure to a familiar environment, use of simple uncomplicated learning materials and preference for a curriculum based on the expansion of intact abilities should be encouraged (Almeida, Corcos & Latash, 1994; Cunningham, 1996; Jobling, 1994; Latash et al, 1993; Uedker, Mangan, Obrzut & Nadel, 1993:273).

- **Speed of responding:** Learners with Down syndrome exhibit a slower pattern of response, probably due to differences in the structure of the nervous tissue, but they react more quickly to visual than other forms of stimulation. Educators often do not give the learner with Down syndrome enough time to respond (Cunningham, 1996:114).

- **Ageing, epilepsy and deterioration:** Adults with Down syndrome suffer from a high prevalence of physical disorders such as sensory impairment, overweight and thyroid dysfunction. They also show signs of earlier ageing and studies have reported idiopathic Parkinson's disease and dementia of the Alzheimer's type with people over the age of 59. Other features such as an increase in sensorineural hearing problems, epilepsy and decreased visual activity suggest neurological deterioration sooner than other people. Sufferers may not be able to communicate pain or discomfort associated with a given illness and ill-health may be overlooked or misdiagnosed (Cunningham, 1996:116; Prasher, 1994:64; Strauss & Eyman, 1996; Vieregge, Ziemands, Freudenber, Pioninski, Muyser & Schulze 1991).

- **Biochemical differences:** Various treatments are offered, such as vitamin and mineral therapy, 5-hydroxytryptophan therapy, cell therapy, thyroid treatment and treatment with the amino acid L-Acetylcarnitine (LAC) (Cunningham, 1996:118; De Falco, 1994).

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- **The lungs and respiratory system:** No abnormalities of the lungs are associated with Down syndrome, but there is a tendency to more infections of the respiratory system. Antibiotics have reduced the risks (Cunningham, 1996:122).

- **The reproductive system:** The sex organs of males and females with Down syndrome are usually not affected. Some women are capable of producing offspring. Only two men with Down syndrome have been documented to have fathered children, indicating that men with Down syndrome are not infertile, but rather that they have a low sperm-count (Cunningham, 1996:124; D'Aegher, 2000).

- **Sleep patterns:** Learners with Down syndrome have frequently occurring sleep problems with wide individual differences. A higher incidence of sleep problems is positively associated with daytime irritability and over activity. Learners with sleep problems are also more likely to suffer from epilepsy. The home environment, maternal stress and the way the child is handled play a role, as sleeping problems is mostly related to social factors and not developmental level (Stores, 1994).

- **Similar sequence of development**: Learners with Down syndrome go through the various stages of development in the same order as others. Genetic abnormalities have an influence on the brain structure and functioning of the learner with Down syndrome (Cicchetti & Beeghly, 1990:20).

- **Structure of intelligence and local homologies**: Learners with Down syndrome have particular difficulties in certain areas, implying a different structure to their intelligence from their peers. When matched to normally developing learners, they perform worse on certain skills and better on others. Local homologies indicate that certain skills seem to cluster together in development, whereas others are independent (Cunningham, 1996:150-207).

Educators need to understand the health difficulties and disorders observed in learners with Down syndrome. A general medical checklist would include the usual health care screening procedures and the awareness that an increased risk exists for certain congenital abnormalities. Growth charts drawn up specifically for children with Down syndrome should be used to record height and weight. Additional assessments

recommended are cardiac, ears/audiology, ENT (obstructive airway disease, eye examinations), orthopaedic examination (for atlantoaxial instability), occupational therapy screening, endocrine assessment (thyroid) and evaluations for genetics, developmental, gynaecological and psychiatric disorders. A specialist who is aware that elevated TSH levels are sometimes transient in Down syndrome must always do the interpretation of blood tests. The nose and sinuses should be kept clean and the learner with Down syndrome should be encouraged to keep his/her mouth closed. Neck X-rays are essential for all learners who engage in activities, which put the neck under strain. Families need support and information on the sleeping patterns of learners with Down syndrome as well as information on controversial treatments such as cell therapy (sicca cell therapy), plastic surgery, sensory integration therapy, massive vitamin and mineral therapy, allergy diets and gluten-free diets, the Feingold diet, the Doman-Delacoto method, developmental optometry, chiropractic and medicines (Cunningham, 1996: 86-124; Coleman, 1994; Parsher, 1994; Ohio/Western Pennsylvania Down syndrome Network,1992; Hestnes et al,1991; Selikowitz,1990; Stores,1994).

3.4.1.2 The Psychological System

- **Cognitive**: Eloff (1997:296) notes that the limitation of most studies of learners with Down syndrome is that they are cross-sectional and the dynamics of the learning process are often ignored. The need to understand the cognitive processes of learners with Down syndrome is crucial as support programmers can succeed only to the degree that the learning processes are understood and this knowledge remains limited. This is placed within the context of the changing approaches to disability with the themes of the interdisciplinary nature of disabilities, multiculturalism, multidimensionality, intra-individual differences, diversity, combinations of disabilities, the need for systemic approaches and the need to limit poor education and disability as a developmental deficit ranging across lifespan. Within a postmodern paradigm horizontal and vertical exploration is encouraged.

  According to the literature reviewed, learners with Down syndrome can achieve scores from less than 20 to over a 100 in intelligence tests. Due to the limitations of intellectual ability tests, behavioural assessments also need to be done. Most learners with Down syndrome can be expected to develop until late adolescence

and early adulthood and will continue to learn new skills and knowledge for most of their lives (with periods of little and rapid progress). With good care, learners' cognitive abilities will remain for the most part or fall into categories of mild and moderate intellectual disability, and they can acquire self-help skills, sufficient language, a range of interests and be able to live in communities or privately. Specific deficits are observed in the area of short-term memory and especially in the area of auditory short-term memory. The working model represents "the system (or systems) responsible for the temporary storage of information during more complex cognitive tasks" (Hulme & Mackenzie, 1992:36). Learning difficulties are associated with short-term memory problems. It is uncertain if all learners with learning difficulties show equivalent short-term memory deficits and if learners with Down syndrome differ from other learners. Rehearsal training strategies can be used to improve the auditory short-term memory of people with Down syndrome (Bower &Hayes: 1994:49; Carr, 1992:197-223; Comblain, 1994; Broadley, Hulme & Mackenzie, 1992:54; MacDonald & Buckley, 1994).

Some children with Down syndrome are able to master simple skills in number and do not lose their abilities in adult years, although they become slightly reduced (Shepperdson, 1994). The ability to consider one's own mental state in relation to those of other people is called the "Theory of Mind" (ToM). The "ToM" acknowledges widespread increases in self-understanding, self-control and social interaction. Older people with Down syndrome have difficulties with "ToM" tasks. Other typical characteristics of the cognitive development of learners with Down syndrome which complicate the study of their cognition include motivational problems, task avoidance, fluctuating performance, poor intentional directedness, unproductive strategies in learning situations and the manifestation of "stop-and-start" phases in cognitive development (Eloff, 1997:300,303; Zelazo, Burack, Benedetto & Frye, 1996).

The use of an errorless learning approach should be encouraged. Success encourages the adoption of task-specific strategies and may place the learner in a better position to deal with the errors necessary for the completion of the learning process. Several skills should be fostered at one time because of the mentioned local homologies (Duffy & Wishart, 1994:57).

- **Language development:** The sequence and structure of early language

development of learners with Down syndrome is largely similar to that observed in normally developing learners. A great deal of language learning appears to have taken place by seven years of age, and for brief periods it may proceed at a near normal pace, but the semantic-syntactic gap widens as chronological age increases and delays are observed at the ten-word stage by about 12 months (Oliver & Buckely, 1994; Fowler, 1990:323; Smith & Tetzchner, 1986). A delay is observed in the expressive language development of learners with Down syndrome and the ultimate syntactic and morphological levels achieved by most children with Down syndrome are consistently low across a number of studies. Intelligibility of speech is a common problem, which affects daily living. Few adults receive speech therapy and this influences their transitions and life in the community. The limited language development cannot be explained as a simple function of general intellectual development, or as a function of more general verbal or communicative skills. The difficulties in speaking clearly show phonological and articulatory problems (Buckley, 1994:7; Steffens and Kimbrough Oller, Lynch & Urbano, 1992; Fischer, 1987; Kumin, 1994:311; Fowler, 1990:302, Beeghly, Weiss-Perry & Ciccheti, 1990:329; Messer & Hasan, 1994).

There is a lack of agreement among researchers on causes of the language deficits and delays in learners with Down syndrome. There are various explanations such as a lack of motivation, the language environment, the indication that the neurological structures underlying language are particularly impaired in children with Down syndrome and the critical period hypothesis. The presence of otitis media may have a greater effect on children with Down syndrome and lead to delayed language functioning because of temporary hearing loss and hearing deprivation in early life. Surgical treatment may reduce the effects of otitis media. The impaired muscular control of the tongue could also influence development. In search of biological underpinnings of specific language impairment in children with Down syndrome researchers have found a left-ear advantage, which is directly related to differences in syntactic processing. Some learners with Down syndrome do, however, acquire substantial linguistic competence (Borsel, 1988; Fowler, 1990:322; Hamilton, 1994:26; Whitman, Simpson & Compton, 1986; Pruess, Vadasy & Fewell, 1987).

Research on the mean length of utterance (MLU) of learners with Down syndrome

suggests that imitation can contribute to language acquisition. Learners with Down syndrome imitate less than other children and need to be encouraged. Imitation does, however, not facilitate grammatical development in normal children, Down syndrome or children with Autistic Spectrum Disorder (Ronda, Ghiotto, Bredart & Bachelet, 1988; Sokolov, 1992:219; Tager-Flusberg & Calkins, 1990).

Early vocal development is generally similar to the normal infant's. There may be some differences in the way mothers interact with and talk to their children with Down syndrome. Mother's often respond to cues immediately and learners with Down syndrome then do not have to repeat their signals and therefore have less occasion to use child-initiated signals. If a signal is not maintained, the infant's social integration through language could be affected (Lynch & Kimbrough Oller, Steffens, Levine, Basinger & Umbel, 1995).

The fast mapping processes for a phonologically simple form do not appear relevant in the expressive language deficits observed in learners with Down syndrome. They learned as much in the short term and retained as much an hour later as the control group. Long-term acquisition of semantic information may occur even in the presence of a severe dysfunction of episodic memory. This system might support the acquisition of semantic information, for instance enhancing learning rate. Secondly normal general intelligence is not an essential condition for preserved vocabulary acquisition (Vallar & Papagno, 1993; Chapman, Kay-raining bird & Schwartz, 1990).

The ability to categorize provides the learner's world with stability in early conceptual development. The research shows an overlap between conceptual development of children with Down syndrome and that of other children, but important differences also emerge. The mother positively correlates the rate of vocabulary development for learners with Down syndrome with the use of semantically contingent utterances. Learners with Down syndrome appear to have deficits in storage and retrieval as well as difficulties in encoding and decoding verbal stimuli. Mothers of learners with Down syndrome seem to be less likely than other mothers to introduce new vocabulary, as the infant with Down syndrome is less socially responsive than other children. Language problems fall in two groups: those involving social and environmental factors and those

suggesting a specific neurological processing deficit. Language learning therefore requires the acquisition of social and linguistic rules. Learners with Down syndrome use the whole-word hypothesis to determine the meaning of new words (Cicchetti & Beeghly, 1990:293, 252; Cardoso-Martins, Jenkins, 1994:13; Leifer & Lewis, 1984; Mervis, 1990:252; Mervis & Mervis, 1985; Holdgrafer, 1982; Sabsay & Kernan, 1993:20-35).

Specialization in non-verbal communication may be the response of the learner with Down syndrome to the problems encountered with expressive language, this possibility could and also indicate that they can learn to capitalize on their interpersonal knowledge. Failure may lead to a perception of inadequacy in interactive contexts contributing to an increase in the level of multi-checking to monitor the social partner in order to achieve efficient communication (Franco & Wishart, 1995).

The learner's response and interaction with the world are dependent upon abilities across several domains as well as the child's inherent biological makeup. Many learners with Down syndrome can learn to read and reading practice improves phonology and articulation. Not all learners depend on phonological awareness, as different learners learn to read in different ways (Cossu, Rossini & Marshal, 1993; Buckley & Bird, 1994; Sheperdson, 1994:100; Wagner, Ganiban & Cicchetti, 1990:174).

Educators and professionals to provide effective support to language development and conceptual development should promote a life-span developmental approach. Language programmes need to involve parents and must be initiated as early as possible. Intervention should be approached in a componential manner, as one cannot generalize from one language system to another. Educators and caregivers need to be encouraged to increase their waiting time before prompting the learner for a response or before suggesting a new topic for play. The learner's lead must be followed, allowing the learner to control the focus of joint attention. Categories for whole objects need to be chosen during the sensorimotor phase and familiar objects which can be manipulated by the learner should be included. The intervention should be playful and the object labelled frequently. A productive pattern of interaction between educator and learner needs to be established (Harris, Dasari & Sigman, 1996;

Rondal, 1991; Mervis, 1990:295).

Support for learners with Down syndrome in developing cognitive and communicative abilities will facilitate language development. Secondary educators need to be encouraged to share the vision of the development of the whole learner throughout his/her life span. Highly structured language training procedures are important as well as drawing upon the naturally occurring language experiences in the learner's life (Pruess, Vadasy & Fewell, 1987; Farrel & Elkins, 1995; Buckley & Bird, 1994; Aparicio, 1989; Good, Feekes & Shawd, 1994; Powell & Clibbens, 1994; Romski & Ruder, 1984; Messer & Hasan, 1994; Kumin, 1994).

The use of sign language should be promoted, especially where there is hearing loss. Signing improves attention, self-esteem, motivation, sensitivity to others, inclusion, reading readiness, mathematics readiness, behaviour management, vocabularies and retention. Learners need to be encouraged to make as many sounds as possible and oral-motor skills could be practiced in fun ways. A preschool programme for total communication by teaching manual signs, without impeding the learner's oral language acquisition or other parameters of development, is of value. Once again parents need to be included in the training model. Educators need to be informed on the use of the computer as an "access" and a "personal meaning" tool toward learning language (Jago, Jago &Hart, 1984; Meyers, 1994).

Educators need to be informed on issues such as children's print awareness, a functional orientated approach to language, drama and communication, biofeedback and building on the strengths of the learner when designing reading and instructional programmes for learners with Down syndrome. A wider range of drinks should be introduced for good vocal health, such as water and fruit juice (Chatterton &Butler, 1994; Pryce, 1994; Saracho, 1984; Sabsay & Kernan, 1993; Jenkins, 1994:13).

- **Assessment:** Indications of habituation (boredom) are the sine qua non of intelligence and are observed with young learners with Down syndrome. Early competence exerts influence towards adaptation throughout the life-span of the learner (Cicchetti & Beeghly, 1990:48; Wagner, Ganiban & Cicchetti, 1990:154).

These issues need to be considered when learners with Down syndrome are assessed.

- **Early communicative play development:** The language deficits of learners with Down syndrome may be part of a broader symbolic deficit that can be observed in other aspects or representational functioning such as symbolic play. Adult-child play situations may prove to be useful alternatives and/or additions to standardized testing for evaluating the cognitive-motivational competence of children with Down syndrome (Beeghly *et al,* 1990:362).

- **Self-monitoring among young children:** forms of behavioural modulation that occur long before the learner becomes responsive to standards of conduct influence growth of self-monitoring among young children with Down syndrome. Neuro-psychological modulation indicates that arousal states are modulated, reflex behaviours are exhibited as organized patterns of functional behaviours and infants can respond to incoming stimuli or "shut out" stimuli during the first months of life. It is observed that the emergence of self-regulation among normally developing children is dependent upon the ability of caregivers to impart information about standards to their children and the ability of children to understand and to act upon their caregivers' expectation. Young normally developing children can produce diversionary means that appear to facilitate waiting, but young learners with Down syndrome do not appear to be able to do so. Distortions in self-regulation may often be due to failures in interactive communications. Young learners with Down syndrome find it difficult to wait. Although they have a knowledge base similar to their peers, they do not seem to be able to use and apply information appropriately when they are on their own. Distortions in self-regulation may be due to failures in interactive communication. Caregivers often have explicit assumptions about children's development and may also have difficulty in reading the child's signals. There are many conditions that potentially make children less receptive to caregiver expectations, such as preoccupation with certain activities and delays in the ability to process visual information, which may predispose them to be more passive or less reactive than other learners. Numerous caregiver, child, and situational factors therefore exist that alone or together contribute to adequate or poor self-regulation. Methods for managing behaviour should be provided to families and educators, and families

who experience difficulties need to be supported. Proper sleep and daily feeding routines need to be established for the infant with Down syndrome. The mother or primary caregiver should be encouraged not to rely on the baby to let her know when he/she wants feeding. Sensitivity to the infant's cues should be facilitated. Information on the multiple factors influencing self-regulation and a multidomain approach in the exploration of behavioural responsivity is essential. A multidomain approach would also provide insight into the organization of abilities that underlie perceived temperament characteristics (Cicchetti & Beeghly, 1990:81; Cunningham, 1996:128-149; Kopp, 1990:234,248; Merwis, 1990:248).

- **Personality and Temperament:** The concept of temperament describes the individual's approach to the world as well as the nature and affective tone of interactions that occur. Individual differences in temperament may be in genetic make-up and the integrity of neurological systems or developmental changes. The four neurological systems form the biological underpinning of temperament and "neurochemical and neuroanatomical studies presented thus far have documented that there are differences in the emotionality, regulatory and maturational components of temperament between individuals with Down syndrome and normal individuals" (Ganiban, Wagner &Cicchetti, 1990:65-76). The manifestation of effect seems to be related to the extent to which a person can appropriately evaluate an event. Temperament is therefore reflective of the development and organisation of reactive capacities, emotionality as well as cognitive and self-regulatory abilities (Ganiban, Wagner & Cicchetti, 1990,1990; Cicchetti & Beeghly, 1990).

Overall studies do not support the idea of a dominant set of behaviour characteristics for learners with Down syndrome. Some characteristics are, however, more often associated with learners with Down syndrome, such as that they are good at imitating and they can be self-willed. A range of temperamental differences associated with the quality of care is, however, observed. Few learners with Down syndrome develop severe behavioural problems. As infants, learners with Down syndrome are often placid, inactive and seem to cry less but react more actively if stimulated. Educators need to be reminded that behaviour serves a purpose and medical conditions that may impact on the behaviour of the learner with Down syndrome should be considered. Educators are reminded to face the learner, be at the same level as far as possible, have eye contact and

consider the speech and language development of the learner (Brown, 2000, Cunningham, 1996:129-150; Ganiban, Wagner & Cicchetti, 1990:6, 63).

- **Emotional development:** Infants with Down syndrome laugh less as the result of a stimulus and their social smile may show dampened intensity and poor eye-contact is also observed. Particular emotions may therefore be expressed in qualitatively different ways. The emergence of new emotions may be dependent upon cognitive advances, but emotions may also provide the context for cognitive development. The transactional model is inherent to the organizational perspective indicating the importance of transaction among genetic, constitutional, neuro-biological, biochemical, psychological and social factors in the determination of behaviour. Various factors operating in normal pathological conditions do not occur in isolation, but together impact upon the developmental process through a hierarchy of influence, and the multiple transactions among parental, learner, and ecological characteristics act in a reciprocal and dynamic fashion. Evidence of dysfunctional development over time indicates the possibility that the learner has been involved in a continuous maladaptive transactional process. A clear sense of identity indicates adequate adjustment by the adolescent. Adolescents with intellectual disabilities may, however, perceive themselves as being psychological empowerment in an unrealistic way that is not conducive to becoming independent. They may hold unrealistic understandings and perceptions of causality and excessively external global perceptions of control (Cicchetti & Beeghly, 1990:47; Erikson, 1968:87; Levy-Shiff,Kedem,Sevilla,1990; Wehmeyer,1994).

- **Early intervention:** Early and continuous education promotes development. Intervention should concentrate on promoting optimal functioning in basic areas through the appropriate match between the developing learner and characteristics of the social and physical environment. A better understanding of parental behaviour in the presence of their children with Down syndrome is essential for understanding the long-range development and adjustment of these learners. The later educational goals for these learners are similar to goals of preschool programmes in that they aim to promote cognitive, linguistic, and social skills by encouraging parents to do the best that they can do. Family and educational support are essential. The success of intervention programmes is promoted by the examination of links in the relationship between early development of

competencies that appear to be precursors to later competencies and discovery of the best way to support optimal development of learners with Down syndrome. Very intensive training (except for specific behaviours) does not reveal major benefits and babies are not damaged if they do not receive plenty of stimulation in the first months or year (Cunningham, 1996; 158-207; Spiker, 1990:425,442-443).

Educators need to be encouraged commence intervention programmes as early as possible. New models of support for learners with Down syndrome, based on their strengths, challenges and individual needs, need to be developed. A commonsense approach to support where the educators take the learner's lead should be adopted. The infant should be provided with response opportunities to behave autonomously and for reciprocal feedback. Parental response should be evaluated in terms of whether it has facilitated or hindered further positive interactions and constructive activities. The parent's praise may divert the learner's attention and fragment the continuity of his/her play. This may cause excessive dependence on extrinsic reinforcement. The use of reinforcement may be more appropriate in other types of interactions, such as encouraging self-help skills. Self-help skills blossom when the mother allows the learner with Down syndrome time to respond rather than rushing in with help and stimulation. There should be a focus on guidance to parents rather than an intensive intervention programme. Parents need to be encouraged to use opportunities for stimulation, such as taking the infant into the kitchen and other rooms where he/she is communicated to continucously. Guidance should also be provided on options for preschool attendance (Buckley, 1994:7; Carr, 1992; Cicchetti & Beeghly, 1990:14,136; Cunningham, 1996:190-208; Kumin, Council & Goodman, 1994; Selikowitz, 1990:125).

Collaboration between professionals and educators, such as physiotherapists, occupational therapists, speech therapists and special educators, is important. Physicians also need to be informed on relevant issues of Down syndrome. Support programmes need to be balanced with the obvious needs of parents coping with their own emotional concerns. Parental involvement is beneficial, but the parent-as-teacher model might be inappropriate for some families and abnormally high levels of contingent responding by mothers may result in decreases in the frequency of spontaneous social-communicative signals by their

children. Regular assessment of the learner with Down syndrome by professionals from a number of different disciplines is important and should lead to a regular review of the learner's placement and general progress (Fischer, 1987; Slikowitz, 1990: 125; Cunningham, 1996:195-209).

A model of interagency collaboration, which includes a multidisciplinary approach throughout the intervention systems, should be adopted for support. In a developing country the goal of providing 'equal opportunities for people with disabilities' is particularly problematic, and there often remains an attitude that only highly trained people can administer special education services (McCormick & Hickson, 1996:66).

- **Transition to young adulthood:** The inclusion of learners with Down syndrome in secondary school is challenging. It is essential to focus on the lifelong development of literacy. Most progress in self-care skills is made before 11 years. Younger generations are better able to look after their own needs and self-help skills are acquired in the same order as children without Down syndrome. It is important to ensure that effective educational services are made available to all learners with Down syndrome with a view to their acquiring competencies that would make for a satisfying adult life. Expectations for learners with Down syndrome need to be revised and opportunities to ensure that their full potential is realized must be created. Areas that need to be addressed in school programmes include good attendance records, working independently, appropriate quality of work, motivation to work, the ability to ask for assistance, acceptance of criticism and maintaining work relationships. Educational programmes should provide instruction consistent with job skills that employers view as critical for job success and school curricula must become more relevant to the world of work in the particular community. Specialist education programming should engage employment specialists as well as job coaches, and situations may be staged at occupational sites. Successful integration training programmes present a challenge for professionals. People with Down syndrome of all ages can work, but we need to study their particular capabilities, train them correctly, adapt jobs to their abilities and give them opportunities. People need to be independent within their homes and communities and be socially integrated into all facets of community life as many otherwise remain socially isolated. Research studies reveal that adults with intellectual disabilities often live in semi-independent

apartments, are active and do not perceive themselves as socially isolated. But although physical integration may be successful, the degree of social integration is often limited. Work is important in the process of social integration, but there seem to be disparities in social support networks due either to a lack of social skills or a lack of support to facilitate the development of friendship with other community members. Many people with Down syndrome lead restricted lives with little contact with others. Consequently it is important to understand the different demands that the school and community will place on the communication skills of the learner with Down syndrome and by enhancing communication skills more opportunities will be created (Carr, 1994 Johnson, 1987; Farrel & Hunt, 1995; Shepperdson, 1994; Kregel, Wehman, Syfarth, Marshall, 1986; Kumin, 1994:231; McCrea, 1993; Bochner & Pieterse, 1996; McKinnon & Stewart, 2000; Rosen & Burchard, 1990).

The relevance of quality of life issues is emphasised as the life expectancy of learners with Down syndrome increases. From the age of 30, learners with Down syndrome are likely to stagnate or show minimum growth and declines in adaptive behaviour. It is never too late for learners with Down syndrome to learn (even adults), but intervention must be constant, systematic, appropriate and based on personal motivation. Normalisation and integration opportunities are essential to facilitate free functioning in society. Professionals need to be aware of the risks such as lower self-esteem and negative social experiences, which may be involved, as inclusion does not necessarily ensure quality of life. Adults with Down syndrome are dependent in various ways on the well being of their ageing mothers and on retaining a sense of optimism and satisfaction with life. In the situation of clinic care a multidisciplinary approach proves to be effective in the management of a variety of patient care needs. Effects of low-quality institutions on the residents are detrimental, but the effects of high-quality institutions vary. Self-image measures are not affected by admission but institutionalized people become more dependent on external cues (Brown, 1994; Bybee, 1990; Cicchetti & Beeghly, 1990:20; Chicoine, McGuire, Hebein, Gilly, 1994; Neumayer, Smith & Lundegren, 1993; Perera, 1994:35; Uval, 1988; Zigman, Schupf, Sersen & Silverman, 1995; Seltzer, Krauss & Tsunematsu, 1993).

Guidelines on the changes of puberty need to be provided to educators. Support should focus on physical development, mood changes, clumsiness, increased

appetite, body odour and sexuality education. Topics such as managing menstruation, masturbation, sexuality in general and marriage, having children, contraception and health in adulthood also need to be included as well as issues of social development, safe travelling, preventing sexual abuse and helping the learner to cope with loss. Attitude changes should be directed toward the principle of normalization as this principle has resulted in many improvements in the quality of life for individuals with Down syndrome. Allowance should be made for the disability of someone with Down syndrome. Parents need to be educated on their legal control, citizen advocacy, self-advocacy, individual programme planning (IPP), accommodation ("letting go"), further education, employment (open employment or sheltered employment), activity therapy centers and leisure. Strategies based on individual choice to prevent stagnation in the adult years, especially in areas such as community skills and emotional and assertiveness needs, should be included in support programmes. Community support and access to more leisure pursuits should be facilitated. Parents must be motivated to adopt positive attitudes as traditional expectations may prevent change in later life. The training of learners with Down syndrome for occupations, adaptation for occupations and opportunities provided according to individual capabilities, need to be encouraged in various systems. Life skills training programmes such as the programme *"Talk to Me: A personal development manual for women and girls with Down syndrome and their parents", need* to be developed and implemented (Brown, 1994:28; D'Aegher, Robinson & Jones, 1999; Perera, 1994; Selikowitz, 1990:158).

3.4.2 THE MESOSYSTEM

Whether we are parents, professionals, or members of the general public, the danger we all face is that our knowledge of a handicap will cloud our vision of the baby, child or person as he or she really is. We need to be constantly alert to this danger and must make efforts to stop focusing solely on the handicap. I often feel parents learn to do this better than we professionals. But for most parents who have just learned that their baby has Down syndrome, it is not an easy process. Fortunately, according to the large majority of parents whom I have known in my work, as they begin to get over their grief and shock, they also begin to see the baby rather than the condition. They begin to learn to live with – and in most cases, to enjoy- their new member of the family (Cunningham, 1996:xi).

Parents of learners with Down syndrome value information they receive but express resentment of record-keeping, anxiety about their role in the infant's development and often experience "burn-out" which could be worsened by messages from professionals that they are insufficiently involved. Parents suffer grief and stress during the development of the learner. Parents of older learners feel less supported and more isolated and parent groups do not appear to be evolving to meet the changing needs of parents. Our knowledge base for understanding the long-term developmental needs of families with children with Down syndrome is still limited, although current family systems models are a step in the right direction in the attempt to describe child development in the context of a continuously evolving family system in which stress, support and resources are viewed as reciprocal influences on the learner's development. Although conflict could arise between family members, it can be avoided if parents and other family members recognize and share their feelings (Cunningham, 1996:55; Spiker, 1990:441).

As the presence of a learner with Down syndrome constitutes a unique stress on the family, it impacts both on the family system and the various ecological contexts in which the family interacts. It is important also to focus on the separation of ecological contexts into those which are intrafamilial and those, which are extrafamilial. Intrafamilial factors are within the family itself, such as complex interrelationships between various familial factors that include the marital relationship, parent-child relationships, and individual parent and child characteristics within an interactive dynamic system. Extrafamilial contexts exist outside the immediate family, such as diverse environmental settings in which families and their individual members interact, including workplaces, schools, neighbourhoods, communities, peer groups and social networks as well as numerous others. Although a high percentage of families with a learner with Down syndrome collaborating in research seemed to be harmonious and low on stress, there are also indications of the adverse impact on numerous aspects of familial functioning. How the stresses and changes within both intra- and extrafamilial contexts influence familial functioning will depend on how well the family and its individual members cope with and adapt to the presence of the learner. Adaptation is not an outcome or end point but a life-span developmental process. Some studies indicate that marital satisfaction is the best predictor of the coping behaviour of mothers of disabled children. Although many parents are forced to give up life projects, they are mostly successful in finding new ones (Branholm &

Degerman, 1992; Cornic, 1990:399,400; Elkins & Brown, 1993:534).

There are some indications that parents of learners with a disability, show more emotional problems than other parents, due to internal conflicts about having a child with a disability. Certain parental characteristics, such as attributions and belief systems, as well as specific child characteristics may be important. The move away from institutionalization has created a new financial setting for adults with Down syndrome. Siblings have also been a source of concern as there are often problems with sibling relationships. Girls with a sibling with Down syndrome are more likely to show conduct problems. One contributing factor could be that mothers may expect them to take more responsibility and failure is reported as conduct problems. There is, however, no evidence that having a child with Down syndrome necessarily produces negative effects in siblings. (Cunningham, 1996: 54; Cornic, 1990:402; Cuskelly & Gunn, 1993; Cuskelly, 2000; Hayes & Cuskelly, 2000; Elkins & Brown, 1993).

The mesosystem can be effective in finding important relationships between the contexts for a learner with Down syndrome and other learners with special educational needs. Parental social networks and support systems are the extrafamilial context that receives the greatest attention. Parents of younger learners utilise more support networks, but older children use less support. Developmental research with high-risk and atypical children indicates that environmental context factors appear to explain outcomes better than does birth or biomedical status alone. The notion that family contexts can serve as self-righting mechanism for children at risk has often been suggested. Within the focus of Down syndrome, the disability can be assumed to provide the catalyst by which the family functions to influence the development of the learner with Down syndrome. Some studies indicate that support to families with a learner with Down syndrome from friends and the community is more relevant to maternal and family status than support from a spouse. Other studies tend to emphasise the marital relationship. A growing body of evidence shows that interactive difficulties can be reduced through preventative or curative support. Infants with Down syndrome are able to enter into reciprocal interaction with their parents soon after birth, and effective professional help can play an invaluable role in aiding parents in coming to terms with and resolving personal difficulties. Many parents are able to estimate their child's functional and competence level quite accurately and pitch their own behaviour appropriately. The mother's practical coping

factor is more important in promoting self-sufficiency than other family factors, especially a planned and flexible approach to child-related problems including openness to professional advice (Berger 1990:137; Cornic, 1990408,409; Hoppes & Harris, 1990; Turner, Sloper, Knussen & Cunningham, 1991:22; Mink *et al*, 1983; Nihira *et al*, 1981; Sameroff & Seifer, 1983).

Support for the parents as soon as possible after they have been informed of the diagnosis of Down syndrome is essential. Parents need to be guided towards positive relationships with the infant, in dealing with the initial shock and despair and in dealing with feelings of conflict. Personal coping skills and social support must be given with a priority on one surrendering of idealized images of the "super parent". Functional reciprocal interactions between parents and the learner with Down syndrome are essential for successful educational support. Commonsense guidelines, which reduce the infant's need for avoidance, and defensive manoeuvres in order to protect themselves from a "flood" of stimulation that they feel they cannot cope with, are essential. To activate and maintain the infant's motivation to play and cooperate with the adult, it is essential to conduct activities within his/her sphere of competence. Mothers of babies with Down syndrome sometimes have difficulties in visual interaction with their children, detecting their needs, attracting their attention and working with them. Modelling techniques of training benefit development in the area of gross motor skills and practical advice facilitates early development and motor stimulation. Physical punishment should be discouraged, but harmonious family interactions and a positive attitude from the mother should be encouraged (Carr, 1992; Aparicio, 1988; Berger, 1990; Turnbull, Patterson, Behr, Murphy, Marquis & Blue-Banning, 1993:17; O' Halloran, 1993:28; Schulz, 1993:31; Vohs, 1993:51; Meyer, 1993:91; Poyadue, 199 3:102; Antonovsky, 1993:114; Krauss & Seltzer, 1993:179; Singer, 1993:218).

Knowledge of potential difficulties in the future social and working life of the learner with Down syndrome may prevent problems. Parents need to be encouraged to take each day as it comes, to get to know their child, tackle situations as a partnership and to avoid allowing the learner with Down syndrome to become the central focus of the family. Family and friends of the learner need to be informed about the learner with Down syndrome, as people take their cues from the parents' reactions and parents need to be conscious of this. Parents need to be helped not to be afraid of people

seeing the child, to become used to tactless remarks and to network with support groups (Cunningham, 1996:55-56).

Parents need guidance on future pregnancies and support in coping with the developmental stages of the learner with Down syndrome. During the neonatal phase enrolment in local support programmes, help in appropriate medical and developmental examinations, advice on applications for supplementary security income, estate planning and custody arrangements, are helpful. During the childhood years (one year to 12 years) parental concerns need to be reviewed. Parents need support in advancing the learner's level of functioning, in setting up educational programmes, and meeting health problems and behaviour problems. Yearly educational assessment, an individualized educational plan until the end of schooling, diet monitoring, tooth-brushing, regular exercise and recreational programmes are recommended. The family's needs should be monitored and supportive counselling should be provided with a focus on good self-care skills. During the adolescent phase (12 to 18years) the learner's medical history must be reviewed, sensory functioning checked and the possibility of behavioural problems assessed. Issues of sexuality must be addressed and general and physical examination is important. The possibility of obesity must also be monitored. Psycho-educational evaluations need to be repeated and independent functioning must be monitored. Psychological and other support should be continued as needed. Health, sexuality, smoking, drug and alcohol education are essential. Functional transition planning should be commenced and estate planning and custody arrangement needs to be updated at this stage. Social and recreational programmes need to be established. Learners need to register for voting and plans for alternative long-term living arrangements need to be considered. For adults (over 18 years) their level of independence in living skills, behavioural changes and/or health problems should be monitored. General physical and neurological examinations, as with adolescence are important. Monitoring of long-term living arrangements, dietary issues and exercise recommendations should also continue. The relation and progressive accommodation between the developing learner and his/her immediate environment should be mediated as different contexts and their members are interdependent and events and changes in one unit reverberate throughout other social settings. Educators need to be informed on ecological influences with a focus on social policy as a factor indirectly influencing family functioning, behaviour and development (Bronfenbrenner, 1979a:3; Berger,1990:135; Lesar, Trivett, Dunst, 1995;

Ohio/Western Pennsylvania Down syndrome Network, 1992).

It is currently believed that learners with Down syndrome need to be mainstreamed in terms of their right to be accepted in their community. In the past segregated schooling has often had negative effects on learners with Down syndrome and poor academic achievements were often due to low expectations and little opportunity. In mainstream schools there is a greater emphasis on academic work. School principals and prospective teachers need to visit the learner with Down syndrome as it may relieve anxieties that the class teacher might have. The amount of support needed must be clarified and organized before the learner begins school, as this will reduce tension. The school should be helped to prepare for the learner with Down syndrome. One might consider discussing the learner with the whole school or staff before the learner arrives, but that would be the school's choice. Schools should receive advice on inclusive education and parents and school staff need support once the learner with Down syndrome has begun school (Bird & Buckley, 1994:83; Petley, 1994:96).

An individual and whole curriculum approach should be encouraged. As indicated reading is important in facilitating speech, language and cognitive development in learners with Down syndrome and they are able to perform well in reading. Educators therefore need to be encouraged to approach reading with positive anticipation. Educators need to be informed on available literature on various topics such as compensating for hearing loss, processing difficulties, motor and visual processing and assessment. For instance therapists to assess language delay often use the Derbyshire Language Scheme. Guidelines to facilitate reading include making available material that relates to the learner's interests and general methods for teaching learners with language disorder or hearing impairment. Reading also facilitates the development of comprehension. Developing note-taking skills and using lists facilitate writing skills and memory development. The "story board" format facilitates the breakdown of information. Using categories of new words being taught and concentrating on the way learners are addressed will affect the way they respond. Strategies such as matching identical flashcards, selecting an associated name with the word, naming the word and reading sentences, are some of the strategies used for advancing reading. After learners with Down syndrome have acquired a sight vocabulary, phonics may be introduced. Learners with Down syndrome also benefit from symbol systems such as the Makaton symbols, which are

available from the Makaton Vocabulary Development Project. Research does not facilitate prediction of which learners will and which will not be able to read (Bird & Buckley, 1994:21-46; Hart, 1992:106).

Writing skills are improved by learners composing sentences, correcting their writing, rehearsing their sentences, copying sentences and using computers. General methods that help all learners also facilitate the development of spelling skills for learners with Down syndrome. Learners with Down syndrome find handwriting difficult, but through practice and motivation they can make good progress. Where learners have very poor control, professional support is of benefit. The literature reviewed suggests guidelines on appropriate sitting positions, position of the paper, pencil grip, types of pen pressure, tension, fluency of writing, desk surface, writing space and hints for left-handers (Bird & Buckley, 1994:21-57).

A greater awareness of specific difficulties in numeracy has increased performance in this area and educators are encouraged to aim for high performance for learners with Down syndrome. Good teaching with a focus on mathematical vocabulary and the use of visual support facilitate this process (Bird & Buckley, 1994: 65-80).

The school needs to be supported in planning and writing an Individual Educational Programme (IEP) for the learner with Down syndrome and educators should be involved actively. The number of outcomes of an IEP should be limited. Year-long outcomes should be planned, with one quarterly written outcome per general outcome (Weisenfel, 1986).

Five essential components are mentioned in the formulation of practical strategies for success. These strategies include structure in the classroom (communication book, individual telephone book, clear specifications to the learner, cards with tasks, individual planners), environmental adaptation (thick pens, technology options), social and behaviour considerations (cooperative learning, buddy programme, social skills training, sexuality education) and curriculum adaptation (reduce number of tasks, simplify content of conceptual language, variety of approaches, support team) (Holden, 2000).

To ensure success in the mainstream the following issues are viewed as important: Firstly the perspectives of parents need to be understood and the learners should be

full members of the school. It is important that the learners are included at an early age. The attitude of the school is essential and assistance should be used wisely. The learner with Down syndrome is seldom the most delayed in the classroom. Primary schools usually have all the equipment they need, but there are difficulties in secondary schools. Lastly the literature shows that teacher aids should preferably work with groups of learners and not only with the learner with Down syndrome (Bird & Buckley, 1994: 91; Giorcelli, 2000).

Peers are regarded as playing an important role during the inclusion of learners with Down syndrome. Peer relations are significant for psychological development, mental health and for optimal personality development. Interactions of learners with Down syndrome with other people are important to instill greater awareness, understanding, empathy as well as forming positive attitudes (Serafica, 1990:371).

Internationally educators are beginning to modify their attitudes toward Down syndrome, but there are still stereotypes and dysfunctional relationships. "The long process of inclusion does not seem causal and linear to us, but rather circular, in particular when one considers the pupils, whether as a resource for inclusion or as a beneficiary of it" (Gherardini, 2000).

3.4.3 THE EXOSYSTEM

Traditional prevention of Down syndrome is based on maternal age with the following risks indicated:

Below 20 years a risk of 1/1700;
20 to 35years a risk of 1/300;
40 years a risk of 1/100;
40 to 45 years a risk of 1/50;
45 to 50 years a risk of 1/10.

The purpose of a prenatal testing is to discover whether the foetus is likely to have any abnormalities. The most common is the *amniocentesis*. More recent methods are chorionic *villus biopsyd* (CVB) or *chorionic villus* sampling (CVS). By such testing public health services create more opportunities for prevention and this is viewed as a contribution to primary health care in the prevention of a particular disability. The risk of miscarriage from amniocentesis for (if conducted by skilled professional) is one in

200. CVB has a higher risk of loss of the foetus. After diagnosis parents often display uncertainty and are vulnerable to outside influence, but usually they have to make immediate decisions (Hitzeroth, 1991:19; Cunningham, 1996).

Genetic counsellors need to be informed and trained for communicating with parents. During genetic counseling the message from the genetic counsellor to parents should be value-free. The various options, such as to terminate the pregnancy, continue the pregnancy to term and care for the infant thereafter or continue the pregnancy and place the infant for adoption, must be shared clearly. Genetic counsellors should also concentrate on the positive aspects of raising a child with Down syndrome and possible adverse psychological effects of second trimester abortions. Support must be provided in coping with the information, as there may be feelings of guilt, denial, anger and unforeseen anxieties. Genetic counselors need to use a non-directive approach to enable parents to make an informed but independent decision (Peuschel, 1991).

Health care services need to be informed of the diagnosis, treatment and management of medical disorders that occur in people with Down syndrome. An active screening programme must be implemented. Effective provision is best made by good quality primary health care and regular contact with learning disability services. Better collaboration between general hospital services and psychiatric services, with possible joint assessments and the improvement of healthcare provision, needs to be facilitated for learners with Down syndrome and individuals with other disabilities. This process should also include regular assessment by staff and the education of the community. Stereotyping of learners with Down syndrome still occurs and public perceptions may increase or limit opportunities for learners with Down syndrome (Prarsher, 1994:64; Wishart, 2000).

Parents need guidelines and support on services provided by local authorities. Support staff needs to be guided on their role and parents should be involved in these discussions to alleviate misunderstandings. Services provided could include the learner's key caregiver or specialist (for instance one experienced professional who provides support and advice), the child development center, early intervention services, home help services, the local Down syndrome association, respite care services, recreational services, after-school and school holiday care, financial assistance and legal assistance. Learners and families may benefit from the

encouragement of practical coping strategies in developing and teaching independent social skills to the learner. Parents of difficult children may need increased support (Turner, Sloper, Knussen & Cunningham, 1991:21; Petley, 1994; Selikowitz, 1990).

3.4.4 THE METASYSTEM

Government, businesses, organizations and individuals are increasingly learning that the challenges of today demand collaborative responses. To achieve our goals as educators we need to collaborate if we want our schools to be an inclusive environment. Collaboration at professional level is essential to enhance collective political power and to sustain diversity and maintain unity. If we practise what we preach, better outcomes for all would be possible. Mainstream educational settings sometimes produce achievement outcomes for learners with special educational needs that are neither desirable nor acceptable. Resources and policies play a role in the level of development the learner with Down syndrome is able to achieve (Ayers, 1994:5; Cunningham, 1996; Zigmond, Jenkins, Fuchs, Deno, Fuch, Baker, Jenkins & Couthino, 1995).

Policy-makers could also do much to improve reporting of abused and neglected disabled learners by advocating new reporting mechanisms and by adhering to existing reporting procedures. Philosophical and institutional barriers between developmental disabilities and child welfare can only be surrounded at the policy level. Responsibilities must be clearly delineated. If policy-makers focus on developmentally disabled children, local administrators and supervisors will begin to examine the adequacy of services to protect such dependents. Initiatives need to be considered to protect learners with Down syndrome from sexual abuse, physical abuse and neglect, as there is an over-representation of disabled learners. Collaboration with child welfare and developmental disability workers in exploring procedures that prevent disabled learners form getting lost between systems is essential. Ways should be considered to ensure that developmentally disabled learners are identified, assessed and tracked. The unique needs of such learners require protocols for determining minimal and desirable services and for monitoring the degree to which parents follow through with recommended services. Developmental specialists could be designated to assist child protection staff as consultants and diagnosticians. In-service trainers should upgrade the skills and knowledge of all child protection workers (Schilling, Kirkham & Schinke, 1986).

3.5 CHAPTER SUMMARY

In this chapter it was observed that various systems may contribute to special needs arising at varying levels, creating differences of context which relate to the socio-economic and political structure of society and the resources and responses of particular communities, schools, families, and children within this structure. A curative approach towards support for learners with special needs, but especially a promotion of social, educational, and developmental changes which can prevent such needs arising in the first place, is suggested (Donald *et al*, 1997:71). The future role of the educational psychologist within the South African context was discussed and summarised as a role of mental health facilitator. A selection of specific needs of the learner with Down syndrome was also identified in this chapter. The following chapter will address the research process of this study.

CHAPTER FOUR
RESEARCH DESIGN AND METHODOLOGY

4.1 INTRODUCTION

Researchers need to explain their research within the context in which they do their work so as to enhance a better understanding of the predominant paradigms in education. The only way to learn about inclusion is "to do" and only through participation can the researcher learn and contribute to a more inclusive scenario (Ballard,
1996:11-14).

The following argument by Mertens (1998:2) endorses my choice to conduct my study from a particular framework, in this case an ecosystemic framework as presented in chapter one.

> Research is one of many different ways of knowing or understanding. It is different from other ways of knowing, such as insight, divine inspiration, and acceptance of authoritative dictates, in that it is a process of systematic inquiry that is designed to collect, analyze, interpret, and use data to understand, describe, predict, or control an educational or psychological phenomenon or to empower individuals in such contexts. The exact nature of the definition of research is influenced by I's theoretical framework and by the importance that I places on distinguishing research from other activities or different types of research from each other (Mertens, 1998:2)

In this chapter the research process of this study will be described. In Figure 13, a graphic presentation of the research process followed in this study is provided.

4.2 THE RESEARCH DESIGN

Babbie and Mouton (2001:74) describe a research design or types of research as a "plan or blueprint " of how one intends to do research. According to them this type of design will then determine the various research methods and procedures as dictated by the nature of the research problem.

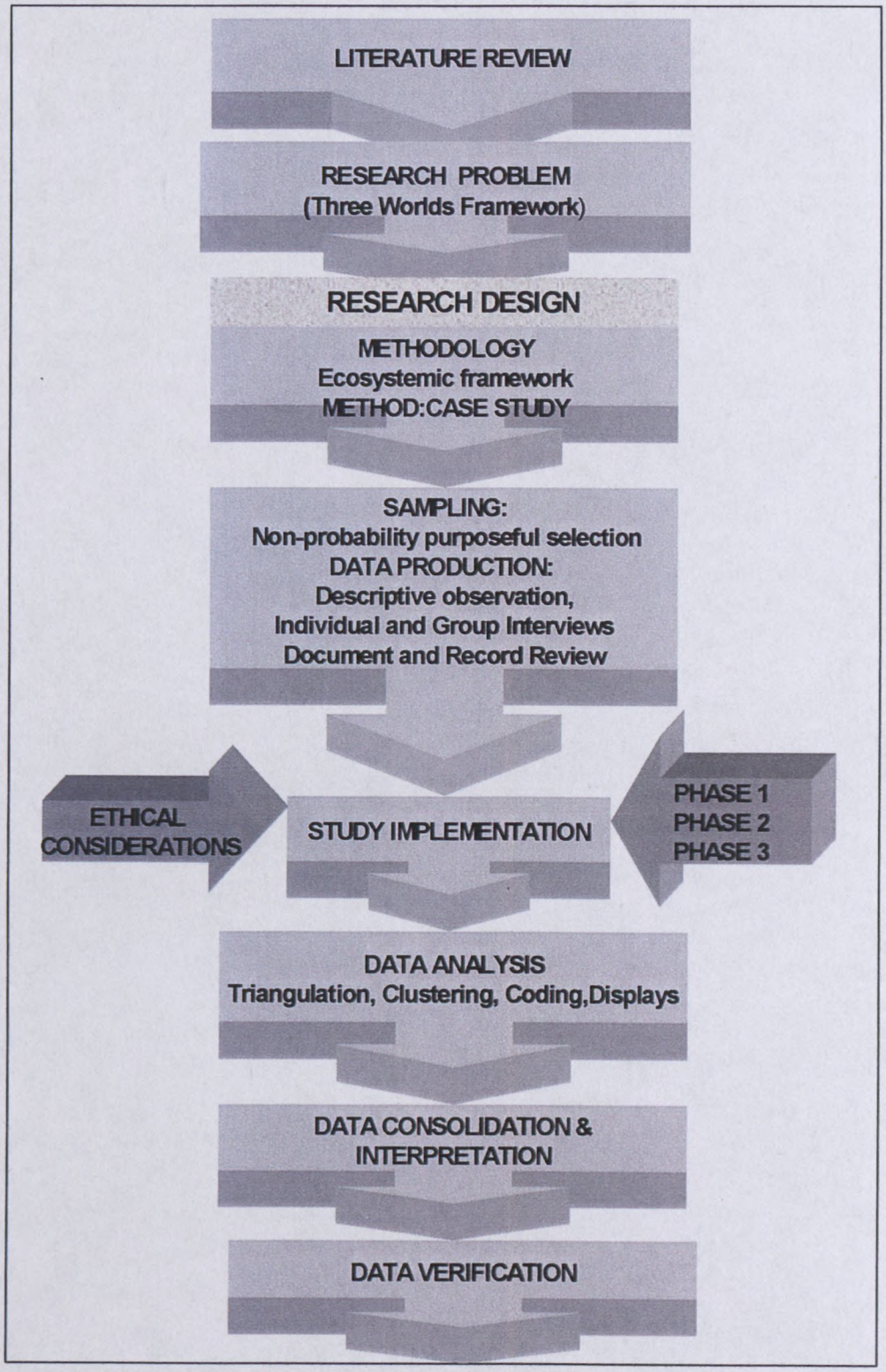
Terre Blanche and Durrheim (1999:31), however, contend that there are "legitimate designs" other than the understanding of research "designs as blueprints". They point out "qualitative researchers in particular propose designs that are more open, fluid and changeable, and are not defined purely in technical terms". Such an approach is described as a strategic framework or plan that guides the research activity towards "sound conclusions" (Durrheim & Terre Blanche, 1999:31).

The research design of my study is flexible and fluid and was adapted as the research process progressed. Such a design is consistent with what qualitative researchers refer to as emergent design (see Cantrell 1993:88; Le Grange 2001:78). As Lincoln and Guba (1985:225) contend, "design of naturalistic (qualitative) inquiry cannot be given in advance; it must emerge, develop, unfold". I was also broadly guided by the following four dimensions suggested by Durrheim and Terre Blanche (1999:31) in the process of developing a research design: the purpose of the research, the theoretical framework informing the research, the context of the research and the research techniques. I continuously reflected on issues relevant to these issues and this process of reflection was "guided by two principles of decision-making: design validity and design coherence" (Durrheim & Terre Blanche, 1999:33). The purpose of my study was discussed in chapter one and presents the unit of analysis for the study. The purpose of the research will also be reflected on the findings of the study. Secondly, I conducted the study from an ecosystemic framework that I discussed in chapter one and will expand on next.

4.2.1 RESEARCH PARADIGM

Durrheim and Terre Blanche (1999:36) assert that a theoretical framework or a paradigm is central to the research design as it influences the research problem and the manner in which the research is conducted. The theoretical framework "provides a rationale for the research and commits the researcher to particular methods of data collection, observation and interpretation" (Durrheim and Terre Blanche, 1999:36).

FIGURE 13: THE RESEARCH PROCESS



Adapted from Fourie (1997:33)

My current understanding of the terms method and methodology is based on Harding's (1987:2) distinction between the two: "method refers to techniques for gathering empirical evidence" whereas "methodology is the theory of knowledge and the interpretive framework guiding a particular research project". Fien (1992:2) holds a similar view to Harding and points out that methodology "is the philosophical framework that guides the research activity". Furthermore, Le Grange (2001,71) asserts that social science literature manifests nuances of meaning of the term. He argues, however, that methodology should not merely be viewed in technical terms of method but concerned rather with "theories behind method".

In the context of World 3 (Metascience, see Figure 1, chapter one) Babbie and Mouton (2001:13) say that it is evident that reflection is crucial in the world of science and this process has led to "the development of various metadisciplines, such as the philosophy and methodology of science". These authors further note that the term "metatheory" is normally used interchangeably with terms such as "philosophy of science", "metascience", and "epistemology of science" and with the development of the social sciences in the past four centuries various metascientific theories have also emerged. Babbie and Mouton (2001:20-45) distinguish between the following four metatheoretical traditions: positivism, interpretivism, critical theories and postmodern theories. Postmodern perspectives broadly inform my research. Postmodernism is not a monolithic entity and so I speak of postmodernisms rather than postmodernism (Babbie & Mouton, 2001:39). However, as I pointed out in chapter one, two broad postmodern perspectives can be distinguished, namely deconstructive postmodernism and constructive postmodernism. The constructive postmodern perspective elicits my strongest assent and the ecosystemic framework in which I locate my research is consistent with this perspective.

4.2.2 CASE STUDY METHOD

As discussed in chapter one, the nature of the research problem led me to the choice of a case study. According to Babbie and Mouton (2001:280), case studies may be traced to Bronislaw Malinowski in anthropology, Frédéric Le Play in French sociology and the Chicago School in North American sociology. A case study may be described as an "intensive investigation of a single unit" and most case studies involve "the investigation of multiple variables", where the "interaction of the unit of

study with its context is a significant part of the investigation. Thickly described case studies take multiple perspectives into account and attempt to understand the influences of multilevel social systems on subjects' perspectives and behaviours" (Babbie & Mouton, 2001:280). According to Merriam (1998:13) thick description means that as full a description as possible is given of the incident or entity being investigated.

Babbie and Mouton (2001:282) further write that conceptual issues such as the problem statement, the construction of a framework (based on a combination of literature review and one's experience) serve as guiding principles and structure data production during a case study. The context needs to be described in detail for the sake of understanding and interpreting the case study. The authors cite Meyer (1983) to support the notion of thick description:

> The surrounding "ecology" or "environment" with its notions of multiple, interacting contextualized systems helps conceptualise the contexts in which the unit of analysis is embedded (Babbie & Mouton, 2001:282).

4.2.3 PARTICIPANTS AND CONTEXT (SETTING)

Five girls and five boys with Down syndrome were selected for the sample; nine were Afrikaans-speaking and one girl was English-speaking. Their ages varied from six to ten years. They all lived in the Gauteng region and specifically in the areas Pretoria, Johannesburg, Vanderbijlpark and Cullinan. The learners were placed in preschools of the parents' choice within their residential area. The preschools varied in their educational methods and general organisational structure: A general description of the preschools and primary schools is given in Table 6.

4.2.4 SAMPLE

A non-probability, purposeful convenience sampling strategy was used. This method of sampling is most commonly used in qualitative research and it acknowledges that the sample may not reflect the larger population. I therefore accept the limitations of the sample and do not attempt to generalize the results beyond the given population (Charles, 1995:98;Cohen & Manion, 1994:88; Mertens, 1998:254).

TABLE 7: PRESCHOOLS AND PRIMARY SCHOOLS	
LEARNER	**TYPE OF PRESCHOOL**
A. Afrikaans girl	Small play school at a home with ten other learners *(Afrikaans medium)*
B. Afrikaans girl	A traditional pre-school close to the university, which was also used as a training center for students. Dual medium *(English and Afrikaans)*
C. Afrikaans girl	Traditional preschool and after-school center *(Afrikaans)*
D. English girl	Montessori school and after-school center *(dual medium)*
E. Afrikaans girl	Traditional preschool *(dual medium)*
F. Afrikaans boy	Playschool at a home with twenty children *(Afrikaans medium)*
G. Afrikaans boy	Traditional preschool *(dual medium)*
H. Afrikaans boy	Traditional preschool *(dual medium)*
I. Afrikaans boy	Traditional preschool and after school center *(dual medium)*
J. Afrikaans boy	Traditional preschool and after school center *(dual medium)*

LEARNER	TYPE OF SCHOOL PLACEMENT FOR GRADE 1
A. Afrikaans girl	Regular government subsidised primary school.
B. Afrikaans girl	Montessori school *(English medium)*
C. Afrikaans girl	Her parents decided to keep her in preschool for another year
D. English girl	Montessori school *(English medium)*
E. Afrikaans girl	Regular government subsidised primary school
F. Afrikaans boy	Playschool at a home with 20 children *(Afrikaans medium)*
G. Afrikaans boy	School for children with hearing impairments
H. Afrikaans boy	School for children with hearing impairments
I. Afrikaans boy	His parents decided to keep him in preschool for another year
J. Afrikaans boy	Regular government subsidised primary school.

The following conditions were observed in the sampling process:

- A population of learners with Down syndrome between the age of five and ten.
- Parents of the learners with Down syndrome had to join the research project voluntarily.
- Parents had to sign a consent form permitting me to use the research for publishing and training.
- Parents had to commit themselves to the following procedures and processes
    - A two-year commitment to the research project (within reasonable limits).
    - Monthly meetings with the educational psychologist and if necessary with other members of the transdisciplinary team.
    - Consent that their child could receive weekly therapy from the

educational psychologist at the school.

- Parents living outside the region of Pretoria had to bring their child for therapy on Saturdays.
- Regular involvement in workshops and other meetings organised by the research team.

- The nature of this study necessitated the use of volunteers as parents needed to have a choice of the type of educational placement of their children. The group was selected after interviews with parents who volunteered. Information was given on the research procedure after which the parents could decide to commit themselves to the research project or not.

4.2.5 METHODS OF DATA PRODUCTION

I prefer the term "data production" to the term "data collection" in line with Gough's (1999:264) argument that we "*produce* data by our own acts of will and intent...data most assuredly *are not* 'fruits' of anything but our own invention."

During qualitative research one focuses on the meaning of situations, and from the outset of data production patterns and explanations start manifesting themselves. During the process of data production a conceptual framework was constructed to indicate the key issues to be studied, which were variables and relationships. A conceptual framework can be developed graphically or in a narrative form. I tried to maintain a balance between a loose and a tightly coordinated design to facilitate comparability and generalizability (Miles & Huberman, 1994:11,17,18).

Babbie and Mouton (2001:282) contend that multiple data sources should be used in case studies, which imply more than one method and the product of this research would be "a thickly described life history" by virtue of its having used "multiple perspectives on multiple systems, using multiple methods and sources of evidence". The four main qualitative data production methods used were the literature review, observation, interviews and, lastly, document and records review. Although the use of multiple methods seems to provide a more comprehensive view of the context, it could complicate data analysis. But as the "reality" in this study is treated as constructed in different ways for various contexts, the focus of the study could not be on a single "phenomenon". Data was produced from all educators and professionals

involved with the learners, including parents, medical practitioners, speech therapists, occupational therapists teachers and psychologists. An attempt was made not to frame questions or direct interviews in a manner as to suggest that the problem was "in" the individual or suggest that the problem was "in" the societal response to the individual's needs. The data produced in this study was narrowed down to the role of the educational psychologist (Cohen & Manion, 1992:270; Cohen & Manion, 1994:269,239-241, Mertens, 1998; Merriam, 1998:204, Silverman, 2000:48-52).

During phases one to three of the project as seen in the research implementation Table 8, page 195, which includes the design phase, implementation phase A, reception phase (preschool), implementation phase B and foundation phase (Grade1), the data production methods included descriptive observation, individual interviews and document and record review. The methods of data production for phase 4 were observation and interviews as well as document and record review.

4.2.5.1 Descriptive observation

The purpose of observation is to gain insight into the research problems. Qualitative research field shifted to placing an increased value on the "insider" perspective, where the researcher takes on more of a membership role. During this study observations were conducted through participant observation with particular attention to complete participation and passive participation. Passive participation means that the researcher is present, but does not interact. Participant observation requires that the researcher adopts dual roles and becomes an instrument of inquiry by being present in the situation but by standing aside to observe it (Mertens, 1998:315; Sherman & Webb, 1988:86). Observations were done during assessment while working with the learners as well as during interviews with the families. All observations were recorded by taking notes during or after the observation.

4.2.5.2 Individual interviews

Interviews with minimal structure are typical of qualitative research and interviews may be individual or in a group. Questions developed as I became aware of the meanings that the participants constructed in their contexts, and questions also developed into a more structured format as the study evolved (Cohen & Manion, 1992:312 - 324; McKerman, 1996:128; Mertens, 1998:321; Mouton, 2001:291).

Babbie and Mouton (2001:290) warn that "depth individual interviews" are "advanced and complex" and are not to be recommended for people without much "interviewing experience", as people being interviewed may become uncomfortable or demonstrate intense emotions. Due to my training as a psychologist, I felt comfortable with this kind of interview, and the nature of the study often required me to attempt to understand the meaning and "construction processes of others". I interviewed educators weekly when I visited the schools, which the learners attended. Parents were interviewed once a month and other professionals were interviewed four times a year in the process of producing data for the evaluation reports. Informal discussions as the need arose, from my side or the side of parents, educators or professionals during the process of the project, also served as a source for data production.

4.2.5.3 Document and record review

4.2.5.3.1 Field notes

Field notes form part of naturalistic observation, with the aim of description from the inside, with the maximum freedom of collecting all the data from a continuous stream of events. For the purpose of this study field notes are brief written notes, which provide a detailed narrative description of observations of individuals, ecology, activities and the sequence of events. The following types of field notes were made during this study: observational field notes, which refer to the description of events through listening and watching; conceptual field notes, which are an attempt to construct concepts from raw data, and interview notes. Analytic memos were included as a means of systematizing my thoughts on new concepts and issues while reflecting on the events (Charles, 1995:33; McKernan, 1996:59,72,95; Sherman & Webb, 1988:85).

The field notes were filed in ten comprehensive portfolios (one for each case), which included all the data under the headings of "Historicity", "Evaluation Reports", "Interviews", "Assessment", "Therapy", and "General". The comprehensiveness of the notations was influenced by practical factors such as the number of professionals and educators involved with the learner, general factors, time available and willingness of stakeholders to provide necessary information.

- **Evaluation Reports and Individual Educational Programmes (IEP's)**

Within an ecosystemic perspective the essential components for the intake process

were identified as the following: defining the presenting problem from the perspective of all the systems, obtaining a developmental history focusing on the learner and the family's experience, reviewing current and past functioning of the learner and exploring the influences of sociocultural and metasystemic variables on the learner's experience and functioning. All information is related to the learner. The experience of the learner is the focus of support because of the dependent role of the young learner in many of the systems in which he/she functions. The learner's vulnerability generally does not permit him/her to transform the systems, such as the family or school, in which she/he interacts. This creates the opportunity for the psychologist to take an advocacy role for the learner. Family members were interviewed to observe interactions between members, gather information about individual perceptions of the learner with Down syndrome and lastly to obtain information on strengths and weaknesses within the family. The purpose was to establish a level of comfort and relationship and an awareness of the possibility of other experiences and to observe systemic dimensions (O'Connor & Ammen, 1997:21-28).

In planning support the psychologist should establish a way of collaborating with the learner and caregivers in a manner that addresses the needs of each participant and keeps caregivers engaged in the support process. This would include a contract between the psychologist, caregivers and educators. When the learner was unable to get his/her needs met, the following possible sources of interference need to be considered: constitutional factors, developmental factors, dyadic interference, which could arise from interactions with certain people, systemic interference (not person specific) and metasystemic interference (cultural or policitical influence). Direct support would include traditional forms of therapy and could be problem-focussed, or directed towards general developmental functioning, towards improving the learner's problem-solving abilities. Work with dyads would include the learner and primary caretaker working towards balancing individual and systemic needs. Support for the family and peer systems also facilitates balancing needs. Indirect support would include activating resources in the environment, such as training parents in certain skills. Consultative support would include support of other systems involving the learner. I would adopt the advocacy role when there was evidence that the family or learner was not able to take care of the problem on her/his own, which increased the dependence on me at that point, and I was therefore cautious in taking this role. I made an effort to understand the working of the system and the power I could be assuming. The primary power I had in any system was my training and role as a

psychologist (O'Connor & Ammen, 1997:105,121-126).
The evaluation reports were divided into the following categories and data was sorted into these categories: historicity, physcial readiness, perceptual readiness, cognitive development, socio-emotional development, reading, writing and computer literacy, school routine and life skills.

The individualised educational programme (IEP) has been the subject of much controversy over its usefulness since its launching in 1975. The IEP attempts to fulfil the requirement of accountability by the achievement of tangible goals for the individual programme of the learner. It also has as goal the active participation of parents. The basic concept of the IEP was included in the Disabilities Education Act of 1990 in the United States of America. The IEP could include a statement of the learner's present level of educational performance, annual goals and instructional objectives, a statement of the specific educational services to be provided to the learner, the extent to which the learner could participate in regular programmes, projected dates of duration of services, evaluation criteria and a schedule for review. Research on the IEP reveals shortcomings in the content requirements. Successful programmes that emerge from the development and implementation and positive outcomes from the use of an IEP are questioned. The literature reveals a relationship among learner characteristics that might affect the manner in which educational outcomes are achieved and an IEP may not be an accurate representation of the ongoing educational programming in the classroom (Gallagher & Desimone,1995:355,356, Lynch & Beare,1990:48;Weisenfeld, 1987:281-286).

It was decided to include individualised educational programmes in the support programme for the purpose of reviewing their practical implications within the South African context. Individual evaluation reports summarising and ordering the information of the individual cases were compiled (Available in Volume B, the Case Study Appendix). All educators and specialists involved with the learner were requested to comment on the various developmental issues. An attempt was made to use uniform criteria in the evaluation of the fields of performance. A symbol or comment would indicate the learner's level of performance. The symbols used for the evaluation reports were as follows:

- **1 - 5**

1 = excellent, 2 = good, 3 = average, 4 = weak, 5 = very weak

- **K, S - K, A**

C = concrete level, S-K = semi-concrete level, A = abstract level

The educator who was providing input could either use the symbols or her/his own comments if the symbols were not applicable. The fields of observation included in the evaluation reports served as general aims to be formulated into objectives in the individual educational programmes (IEP's) according to the learner's individual level of development. The following categories were indicated:

- Realistic objectives for 1996
- Objectives for the following two years
- Objectives, for more than two years (Volume B, Annexure B)

The concepts " Aims " and " Objectives" were still used for the purpose of these records as the description of outcomes was only available after the individual educational programmes were designed and the educators involved in the programme had not yet received training in Curriculum 2005.

- **Interviews**

Fieldnotes were made of the interviews with parents, educators and other professionals. These notes were made in detail. For ethical reasons I decided not to make audio tape recordings of these interviews, as it could inhibit the spontaneity of the participants.

- **Assessment**

I assessed the ten learners with Down syndrome on the following psychological tests:

- The Cognitive Control Battery (Santostefano, 1984)
- JSAIS (Junior South African Individual Scales: GIK-8)
- Griffiths Mental Developmental Scales
- University of Pretoria Group Test for School Readiness (Sonnekus & Le Roux, 1980).

- *The Cognitive Control Battery*

The Cognitive Control Battery sets out to evaluate the relations between the learner's cognitive functioning and his/her behaviour directed towards facilitating and coping. Secondly this test evaluates the relationship between the learner's cognitive

functioning and expressions of emotion, and lastly the types of cognitive activity associated with dysfunctional functioning. This test consists of three subtests, which are the Scattered Scanning Test (SST; focal attention), the Fruit Distraction Test (FDT; field articulation) and the Levelling-Sharpening House Test (LSHT; levelling-sharpening). The subtests may be administered as a battery or separately. This test provides a dynamic representation of the cognitive functioning of each learner and also contributes to clinical research. The primary aim of each subtest is to determine the developmental status of each of the learner's cognitive controls.

> Cognitive controls have the status of intervening variables that define principles by which motor behaviour, perception, memory, and other aspects of cognition are organized as an individual coordinates himself or herself with environmental demands. Five separate dimensions of cognitive control have been identified (Santostefano, 1988:7).

The cognitive controls are identified as body-ego-tempo regulation, focal attention, field articulation, levelling sharpening and equivalent range. The first dimension, **Body-ego-tempo regulation,** represents the way in which "an individual uses images and symbols to represent and regulate body motility". Development progresses from initially constructing global mental images to ones that become more detailed and differentiated. **Focal attention** describes the manner in which the learner "*surveys and samples a field of information*", developing from slow (passive) scanning of narrow segments of the field towards more active scanning of larger segments (broad scanning). **Field articulation describes** the manner in which the learner engages with information that is relevant or irrelevant to the task at hand. This dimension develops from young learners attending to relevant and irrelevant information almost equally towards the gradual direction of attention to what is relevant and withholding attention from irrelevant information as the learner becomes older. **Level sharpening** indicates the learner's style of dealing with information over time and the construction of memory images and the way the images are compared with present perceptions. This dimension develops from a global fluid memory towards a more differentiated, articulated stable memory. **Equivalence range** deals with the range of categories a person uses to group or categorize information. This last dimension is not evaluated in the Cognitive Control Battery (Santostefano, 1988:7,22).

The model assumes that people are born with the five cognitive controls available and each control develops from a stage of "*relative globalness and lack of integration*

to a state of increasing differentatiation, articulation, and integration" (Santostefano, 1988:7). The principle of directiveness is formulated and this has implications for diagnosis, as it suggests that the controls are interrelated and interdependent. From this model adaptation is perceived as "*an active, sensitizing process as well as an insulating, desensitizing process*", which facilitates autonomy of the individual. The adaptive process includes a reciprocal relationship between the individual and the environment and over a long period of time the learner will present to the environment "*an evolving series of average and expectable organizations of behaviour*" which describe long-term adaptation. Short-term adaptation is indicated by a sudden shift in the environment, which may affect the pace and complexity of the stimulation, and a learner may need to regress to previous levels of cognitive organization to cope with environmental changes or may show progressive organization. The shift is defined as **cognitive control mobility** and is influenced by constitutional makeup, previous environmental changes and the current developmental phase. It is assumed that cognitive controls facilitate adaptation and development through the correlation of the demands of information from the external environment and the internal environment of feeling and fantasies. This process is described as cognitive-affective coordination. The coordination of external and internal information progresses through stages of development. For the young learner information is experienced in highly personal terms and cognitive controls are oriented toward information from the inner world of fantasy. From the age of five the cognitive controls become oriented toward external information, which enables the control of fantasies (Santostefano, 1988:10,11).

The analysis of the test results provides a profile of the learner's cognitive strategies as observed during the process of information processing. This information may support programmes and provide information on the progress of the learner. The Cognitive Control Battery is applicable for learners between the ages of four and 16 years, but qualitatively it may be used for older learners. Norm tables have been standardised up to the age of 12 years and they enable the transfer from raw scores to t-scores and percentiles, which subsequently can be presented graphically. Prescribed instructions are provided for each subtest and the test may be administered in Afrikaans or English (Eloff, 1997:204,205; Santesfefano, 1988:ix, 3).

- *The Junior South African Individual Scales (JSAIS)*

The Junior South African Individual Scales (JSAIS) have been compiled to provide a profile of the general intellectual level of children and to evaluate the learner's strong

and weak points in some significant facets of intelligence. A profile is compiled from the results of the subtests, which are presented graphically as standard points. As this is a differential battery, it is possible to detect weaknesses and strengths. The average performance achieved by learner in the various subtests is viewed as a reflection of his/her general performance level on the field of each subtest. Although the JSAIS is a point scale and not a performance age scale, the performance in the various subtests can be transcribed into test ages. The test may be used for learners from three to seven years of age and test results are transcribed from scale points to test ages by means of norm tables. Scaled scores can be transformed to an Intelligence Quotient on a GIQ 12 scale or GIQ 8 scale. For the purpose of this study the GIQ 8 scale was used. The JSAIS may be administered in Afrikaans or English. The test enables the professional to make qualitative observations of behaviour such as concentration, attention, endurance, hyperactivity, impulsivity and attention deficits. A test to evaluate social reasoning is lacking in this battery (Eloff, 1997:209; Madge, 1981:1-5).

- *Griffiths Mental Development Scales*

The Griffiths Scales of Mental Development (Griffiths Scales) were developed in Great Britain for use on children up to eight years and the scales were introduced to South Africa in 1977. The test allows for the assessment of locomotor development, personal-social adjustment, hearing and speech, hand and eye co-ordination and performance. It is assumed that biological growth takes place at a similar rate for most human beings and that play is a universal phenomenon. The items in the Griffiths Scales are assumed to be common to many cultures and the test is therefore assumed to be culture-fair and suitable for the South African context. The test is adequate for the testing of learners with intellectual disabilities far beyond the eighth year and can be administered in English, Afrikaans and Xhosa (Allan *et al*,1988:2; Griffiths,970:9).

- *Group Test for School Readiness: University of Pretoria*

The Group Test for School Readiness is viewed as a screening test which gives the school educator with instrument that provides a differentiated view of the level of school readiness of the learner. This test may be administered by school teachers and has been compiled to evaluate a variety of facets of the learner's psychic life (Manual:Group Test for School Readiness, University of Pretoria).

- **Therapy**

During this study I provided therapeutic support to the learners with Down syndrome and their families. Therapeutic support during the research was based on a framework of integrative psychotherapy. As Santostefano (1995:xvi) writes:

> ... integration is not just a hodge podge of eclecticism, a salad with a little of this and a little of that tossed in. The goal rather, is the development of a new, coherent structure, and internally consistent approach both to technical intervention and to the construction of theory... Integration, then, attempts "to make whole", to unify a body of knowledge in a systematic way that is coherent and heuristic.

The therapist must formulate comprehensive treatment outcomes consistent with the theoretical model being used. A treatment contract must be negotiated with the learner and primary caregivers to address everyone's needs in a way that maintains their engagement in the treatment process. The treatment outcomes must be formulated into a treatment plan. Generic outcomes imply skills, knowledge or values, which the therapist would like the learner to demonstrate by the end of the therapeutic process, which would be supportive of the learner's lifespan development. This is particularly relevant for the learner with a disability where the goal is independence and inclusion in the community. Specific outcomes are the endeavour of all individual sessions and include activities such as relaxation and cognitive ordering (Eloff, 1997:210; 115; O'Connor & Ammen, 1997:105). The dominant therapeutic strategies integrated during this study were Cognitive Control Therapy, Developmental Play Therapy and Systems Therapy.

- *Cognitive Control Therapy*

Cognitive therapy is described as structured, short-term therapy oriented towards current problems and applied in active collaboration with the client. Included in this category are those therapeutic techniques, which assume that therapeutic change can be constructed through changes in the cognitive functioning. Cognitive control therapy is specifically directed at learners with cognitive dysfunctions with the goal of rehabilitating cognitive structures (Engelbrecht, 1990:107; Kaplan *et al*, 1994:860; Santostefano, 1985:1,10).

Cognitive Control Therapy is highly structured and the therapeutic programme is presented in a systematic order. Dysfunctional cognitive controls are identified and the outcomes are formulated for each particular session. Each session is unique and shaped for each individual and the progression towards specific outcomes is planned

together with the learner as therapy develops. This requires flexibility and adaptability from the therapist. Cognitive Control Therapy is divided into three phases. **The beginning phase** is a period of establishing a relationship and starts at the time of assessment. Learners are prepared in discussion on the nature, goal and frequency of therapy. An attempt is made always to use the same room for therapy. Observation is always communicated to learners to give insight into the way to fulfil cognitive assignments. During the **middle phase of therapy** it is important to develop a positive attitude toward learning tasks in general. **The final phase** of therapy concludes the therapeutic process and leads to termination (Eloff, 1997:211; Santostefano, 1978:527-534).

Cognitive Control Therapy is assumed to be relevant for the learner with Down syndrome, as learners with learning difficulties need effective cognitive strategies to provide functional meaning to stimuli from the environment. Inadequate cognitive functions can be divided into three phases in the cognitive process: input, elaboration and output. The literature review revealed that learners with Down syndrome tend to avoid learning tasks, they do not build on success like other learners and cognitive development seems less ordered. Test performance does not indicate competence and they are sensitive to the structure of tasks presented. "Won't do" therefore does not imply "can't do" and may only be "switching-out" behaviour. Social skills are often misused as avoidance behaviour and are viewed as one of the strengths of learners with Down syndrome (Eloff, 1997:140; Wishart, 1993a: 50-54).

There should be optimism about the potential of the learner. Feuerstein, Rand and Rynders (1998:5-7) say that humans are modifiable, the learner is modifiable and the educator is capable of modifying the learner. The educator may be a person who has to be modified and society and public opinion are modifiable. Reluctant learners may be engaged by moving on to a new or more appropriate level of task or by breaking down the target task into more acceptable units (Eloff, 1997:95-199; Feuerstein *et al*, 1988:5-10; Messerer *et al*, 1984; Engelbrecht, 1996:205; Wishart, 1986:246; Wishart, 1991:28).

- *Developmental Play Therapy*

Client-centerd therapy claims that a "Person-centered theory postulates man's

tendency toward self-actualization" (Corsini, 1984:142). Developmental Play Therapy, as a client-centerd therapy, is guided by the following assumption: learner-experiencing him/herself as touched develops a sense of self when touched by a capable adult who is comfortable with touching. The adult should provide this relationship and structure the therapy session by controlling the activities. This therapy is recommended for learners with Attention Deficit Disorder (Brody, 1993:7,9).

In this study Developmental Play Therapy is integrated with the theory of Ecosystemic Play Therapy in approaching the context of his/her ecosystem. The therapist constantly maintains a systems perspective and the basic systemic unit in Ecosystemic Play Therapy is the individual child, not the family system. The child's ecosystem includes both the child's interactional systems, such as family and peers, as well as the child's intrapsychic system. Although the individual in the family may create a system of relationships that have a powerful effect on the members of the family, the autonomy of the individual is maintained. This implies that "we experience an interaction with our world and create some meaning internally as a result of that interaction. As we create meaning, we create our reality" (O'Connor & Ammen, 1997:4). To understand the child's functioning within the system the therapist must understand the child's individual perception of how he/she gets needs met in the system (O'Connor & Ammen, 1997:4,5,122).

- *Systems Therapy*

Systems Therapy can be viewed as a comprehensive set of interventions for treating the family, including individuals, as well as engaging with other systems and contexts in which these are embedded. It provides a paradigm from which to view multiple functions and contexts of behaviour. Traditional systemic approaches toward the support of children and families assume that the family is the basic systemic unit for intervention. It is also important for systemic therapists to move into the community to establish community-based intervention programmes from an ecosystemic paradigm directed towards a process of empowerment. The "sender" (the therapist sub-system) of the therapeutic message should share a relationship with the "receiver" (the family subsystem) of the message, to ensure that the message proceeds from one component of the ecosystem to the other and to maintain the therapeutic ecosystem. General systems theory assumes that dysfunctional interaction, which is maintained by certain behaviour, is changed through

psychotherapy. From a second-order perspective a system enters psychotherapy with a particular constructed reality in which, for example behaviour attributed to Down syndrome is the central focus. During psychotherapy it is attempted to co-construct a different reality in which Down syndrome and the related behaviour are no longer central. This process is a linguistic process and the psychologist is part of the system that constructs the "new" reality. The reality that is co-constructed in a system has to fit in with the perceptions the participants have about themselves, each other, the problem and the world in general. This co-constructed reality may also be called a "domain of consensus" or "ecology of ideas", and a second-order perspective may therefore be called an ecosystemic approach, as it combines the system and the ecology (Fourie, 1997:16,17; Shazer, 1982:6; Mason & Rubenstein, 1989:2; Mikesell, Lusterman & McDaniel, 1995:xiv; O'Connor & Ammen, 1997:4,5,122).

4.2.5.3.2 Questionnaires

Questionnaires were handed out periodically. The opinions of the participants were sought by means of non-specific questions and care was taken not to ask leading questions (Cohen & Manion, 1994:92; Tuckman, 1994:217).

4.2.5.3.3 Other documents and records

All documents and records available providing background and insight into the learners and their contexts were studied. Typical documents that were important for this study were educational files, individualized educational plans, school reports, medical reports and reports from other professionals. The parents of each learner completed a comprehensive background questionnaire. Relevant issues in the questionnaires were discussed with parents during interviews. Access to documents was negotiated and permission received (Mertens, 1998:324).

4.2.5.3.4 Video recordings

Video recordings of random events and routines in the day of the individual learners in preschool and Grade 1 were made twice during the study. These recordings were not made for the purpose of data analysis, but for use at conferences and training workshops.

4.2.6 STUDY IMPLEMENTATION

The following phases were followed in the implementation of this project (Bondesio, 1996:131-133):

- The design phase
- The implementation phase
- The report
- The way forward

The phases appear in more detail in Table 8.

A summary of the managerial tasks that were discharged is provided:

- Anticipation (preparation, procedures and organising).
- Implementation (meetings with project team, communication and problem solving).
- Control (monitoring and control of implementation) (Bondesio, 1996:128,129).

Permission was obtained from the Department of Education to place the learners in the reception year although some of the learners were of school-going age. Auxiliary services were approached for school placement in Grade 1. Thereafter appointments were made with principals and, if requested by the principals, meetings were held with the school board for placement. After the placement of the learner had been finalised, each school received the following: a portfolio including a photograph of the learner, personal information on the learner, a description of the proposed research process, and general information on inclusion and Down syndrome. The schools were provided with information and support according to their needs. Educators were trained and the permission of schools was always requested when therapy, observations or video recordings were made. All procedures and events were documented throughout to ensure a successful research progression and intervention that could meet challenges occurring during the process. The complete process of the research, is shown in Table 8.

4.2.7 DATA ANALYSIS

Data analysis in qualitative studies is an ongoing, systematic, comprehensive process, which includes reflective activities. In this study the analysis strategy used was content analysis, which means that the content of the field notes, interviews and documents were analysed qualitatively (Merriam, 1998:159). Analysis of case study data also involves the organization of findings, the evaluation of the appropriateness of generalization and the issue of theory development. The organization of case

study findings presents a challenge because of the volume of data, and it is essential to account for the "multidimensionality of the findings", which is done by "presenting the multiple patterns of phenomena and by describing the context and conditions under which the patterns appear" (Babbie & Mouton, 2001:283). The first step of my data analysis was reading all the data and then dividing it into smaller, meaningful units. From the literature review predetermined categories were drawn. Comparisons were used to build and refine flexible categories, which were modified with further analysis and the research proceeded. The literature relevant to the research problem was categorized and cited. Observations were documented and organised chronologically to form part of the database. Field notes were reviewed and domains of the phenomena observed were identified with the purpose of defining categories and relationships. I made an effort to attempt to understand what the interviewees were saying rather than what I expected them to say. Verbal and non-verbal communications were analysed, meanings, clustering of units and the establishment of themes within the clusters were included. Themes were then contextualised and a composite summary was written for the research report. Documents were organized and included in the research report if appropriate. Questionnaires were analysed qualitatively to find trends and needs. Psychological tests were analysed quantitatively but interpreted qualitatively. The raw test scores were converted into standard scores and norms to make possible comparison of the various scores each learner and placed in the perspective of the multiple case studies. Video recordings were edited and ordered chronologically for training workshops and conferences. Completeness and accuracy were checked. The result of the analysis is a synthesis in the form of themes and the development of limited generalizations (Cohen & Manion, 1994:101,329-333; Fourie, 1997:38; Mertens, 1998:3 48; Sherman & Webb, 1988:85; Tuckman, 1994:186,303).

> Coding occurs at two levels - identifying information about the data and interpretive constructs related to analysis (Merriam1998: 164).

Coding is analysis and includes data labeling or codes assigned to units of the data collected during the study. With the emphasis on the meaning of the word, the code enables the organization of data. Types of codes include descriptive codes, interpretive codes and pattern codes. From the literature review, conceptual framework and research questions, a provisional "start list" or "master code" of codes was created, which indicated essential variables of the study. During data collection

other codes emerged or codes from the start list were redefined or discarded. An attempt was made to order codes conceptually and to place codes on a single sheet as this strengthens empirical validity (Miles & Huberman, 1994:57-62). A trail of evidence is available with me (the researcher), in Volume B. The starting list of codes is presented in Table 9.

A data display is defined as "an organized, compressed assembly of information that permits conclusion drawing and action" (Miles & Huberman, 1994:11). It is difficult to interpret unreduced, voluminous text, but from the visual presentation of data displays, which provide a full perspective of a data set, valid conclusions may be drawn. The argument is: " You know what you display", and the focus of the study will determine the display format. Data can be displayed as partially ordered displays, time-ordered displays, critical incident charts, role-ordered displays and conceptually ordered displays. For the purpose of this study data entries were multiform and the two primary types of data Displays, namely matrices (defined rows and columns) and networks (a series of nodes with links between them), were included (Miles & Huberman, 1994:91-93,102-137).

The data from the individual case studies was clustered within predetermined categories during analysis. The categories were derived from the evaluation reports. A concept map of the categories is presented in Figure 13.

An attempt was made to act on Babbie and Mouton's (2001: 283) suggestion for the modes of case study analysis; citing Yin (1994) they mention "Pattern-matching" where patterns emerging from the data are matched with "patterns in the theory or in alternative predictions" , and "explanation-building", kind of pattern-building where "the idea is to generate explanations about your case".

TABLE 8: RESEARCH PROCESS AND IMPLEMENTATION

PHASE AND ACTION TAKEN	SUB-PROBLEM	LITERATURE REVIEW	DESCRIPTIVE OBSERVATION	INDIVIDUAL & GROUP INTER-VIEWS	DOCUMENTS & RECORD REVIEW Questionnaires Other documents	DOCUMENTS & RECORD REVIEW Field notes	Video
PHASE 1 DESIGN PHASE: 1995							
Research problem	**A & B**	□					
Visit pre-primary schools to find suitable schools for the learners			□	□		□	
Orientation of parents			□	□		□	
Evaluation of learners			□	□		□	
Assessment to determine if all procedures are in place			□	□		□	
Planning the role of the educational psychologist			□	□		□	

PHASE AND ACTION TAKEN	SUB-PROBLEM	LITERATURE REVIEW	DESCRIPTIVE OBSERVATION	INDIVIDUAL & GROUP INTER-VIEWS	DOCUMENTS & RECORD REVIEW Questionnaires Other documents	DOCUMENTS & RECORD REVIEW Field notes	Video
PHASE 2 IMPLEMENTATION PHASE A. RECEPTION PHASE (PRE-SCHOOL) January 1996	A B C D E						
Meeting new parents			☐	☐		☐	
Meeting new learners			☐			☐	
Assessment						☐	
Planning of year schedule: ☐Meeting with parents, every three weeks ☐Scheduling of therapy sessions			☐	☐		☐	
Therapy done weekly with every learner		☐	☐			☐	
Video recordings of learners at school							☐
Learners from Randburg and Vanderbijlpark come to the practice			☐	☐		☐	
Workshop for educators			☐	☐		☐	
Regular meetings with educators			☐	☐		☐	

PHASE AND ACTION TAKEN	SUB-PROBLEM	LITERATURE REVIEW	DESCRIPTIVE OBSERVATION	INDIVIDUAL & GROUP INTER-VIEWS	DOCUMENTS & RECORD REVIEW Questionnaires Other documents	DOCUMENTS & RECORD REVIEW Field notes	Video
Planning of workshops for parents during 1996			☐			☐	
Presentation of workshops for parents			☐	☐		☐	
Two questionnaires for teachers					☐		
Two questionnaires for parents					☐		
Therapy and other interventions for other members of the micro system			☐	☐		☐	
Coordinating and transdisciplinary meetings with other therapists		☐	☐	☐	☐	☐	
Design of the individual educational programmes and evaluation reports for each learner		☐	☐	☐		☐	
Distribution of these programmes and reports to, educators, parents and therapists for their input			☐	☐		☐	
Pioneering for primary school in 1997			☐	☐		☐	
Planning of programme in 1997			☐	☐		☐	

PHASE AND ACTION TAKEN	SUB-PROBLEM	LITERATURE REVIEW	DESCRIPTIVE OBSERVATION	INDIVIDUAL & GROUP INTER-VIEWS	DOCUMENTS & RECORD REVIEW Questionnaires Other documents	DOCUMENTS & RECORD REVIEW Field notes	Video
Year-end function, handing over certificates to learners and educators			☐	☐		☐	
Attendance of workshops			☐	☐		☐	
December 1996 Assessment of the learners			☐			☐	
PHASE 3 IMPLEMENTATION PHASE B. FOUNDATION PHASE (GRADE 1) January 1997	A B C D E						
Planning of parent meetings			☐	☐		☐	
Regular parent meetings			☐	☐		☐	
Completion of evaluations			☐			☐	
Placement in Grade 1			☐	☐		☐	
Facilitation of problems and support to all stakeholders			☐	☐		☐	
Therapy to learners		☐	☐			☐	

PHASE AND ACTION TAKEN	SUB-PROBLEM	LITERATURE REVIEW	DESCRIPTIVE OBSERVATION	INDIVIDUAL & GROUP INTER-VIEWS	DOCUMENTS & RECORD REVIEW Questionnaires Other documents	DOCUMENTS & RECORD REVIEW Field notes	Video
Video recordings of learners in school							☐
Therapy to other members of the micro system		☐	☐	☐		☐	
Networking at various levels of the ecosystem		☐	☐	☐		☐	
Transdisciplinary meetings			☐	☐		☐	
Coordination with educators and therapists		☐	☐	☐		☐	
Planning of workshops for educators and parents		☐	☐	☐		☐	
Attendance of workshops		☐	☐			☐	
Workshops Training for the Department of Education in Curriculum 2005			☐	☐	☐	☐	
International Down syndrome conference in Madrid Spain		☐	☐	☐		☐	
Close liaison with the Down syndrome society		☐	☐	☐		☐	

PHASE AND ACTION TAKEN	SUB-PROBLEM	LITERATURE REVIEW	DESCRIPTIVE OBSERVATION	INDIVIDUAL & GROUP INTER-VIEWS	DOCUMENTS & RECORD REVIEW Questionnaires Other documents	DOCUMENTS & RECORD REVIEW Field notes	Video
Coordination with therapists			☐	☐			
Year-end function			☐	☐		☐	
Modifications of individual educational programmes. Distribution of evaluation reports			☐	☐		☐	
PHASE 4 REPORT WRITING: 1998+	**A B C D E**	☐	☐	☐	☐		
Facilitating for Downs syndrome society			☐	☐			
Member of management of Down syndrome society			☐	☐			
Facilitating of learners of research group			☐	☐			
Therapy of learners in the micro system			☐	☐			
Workshops for Down syndrome society		☐	☐	☐			
Networking with auxiliary services			☐	☐			
Training and networking with other specialists			☐	☐			

PHASE AND ACTION TAKEN	SUB-PROBLEM	LITERATURE REVIEW	DESCRIPTIVE OBSERVATION	INDIVIDUAL & GROUP INTER-VIEWS	DOCUMENTS & RECORD REVIEW Questionnaires Other documents	DOCUMENTS & RECORD REVIEW Field notes	Video
PHASE 5 **THE WAY FORWARD**							
Implementation of research results Further research							

TABLE 9: STARTING LIST OF CODES: CATEGORIES FROM THE LITERATURE REVIEW

THE ROLE and FUNCTIONS OF THE PSYCHOLOGIST	
Phases in the role of the Psychologist	PHASE
Flexibility	FLEX
Facilitator/ Teacher	FAC
Learning Material Developer	MAT
Evaluator/Assessor	EVAL
Analyst/diagnostician	DIAG
Learner Supporter	LSUP
Teacher Supporter	TSUP
Manager of Learning Systems	MAN
Administrator	ADMIN
Collaborative Consultant	COL-C
Whole school development function	WSD
Systems evaluation	SYS-EVAL
Mediation	MED
Presentations of workshops	WS
Mental Health facilitator	MHF.
Primary mental health promotion	PRIM-MENT-H-
Psychotherapy	PSYC
Networking	NET
Leadership	LEAD
Life span development	LSP- DEV
Issues of diversity	DIV
Advocacy	ADV
Professional, ethical and legal role	PROF-ETH-
Clinical psychopharmacology	CLIN-PSYC-PHAR
Circularity scientist	CIRC-SCIENT
Prescriptive function	PRES
SUPPORT WITHIN AN ECOSYSTEMIC FRAMEWORK	
Adaptation	ADAPT
Adolescence	ADOL
Aesthetic	AES
Autonomy	AUT
Biopsychosocial (balance)	BIOPS.
Boundaries (individual/intrafamilial) (diffuse/rigid)(proximity, generational, responsivity)(identity formation/family identity/underinvolved)(isolated)(social system)(adaptive) (coordination)(self-management)	BOUN
Constructivism	CON
Change/Morphogenesis	CHANGE
Choice	CHOICE
Context	CONT
Coupling	COUP
Cybernetics/ Circular causality of feedback loops	CYB
2nd-Order Cybernetics	2nd CYB
Development	DEV
Early intervention	E-INT
Ecosystemic	ECOS
Family identify	FAM-ID
Internal working model	IWM
Autopoietic organization	AUT
Intrapsychic	INTRA
Interpersonal	INTER
Family	FAM
Holding environment	HOLD
Behaviour	BEH
Blaming	BLAM
Interaction	INTER
Intervention/support	SUP
Learning organization	LORG
Linear/Circular	LIN
Domain of consensus	CONS
Dominant discourse	D-DISC
Narrative	NAR
Mesosystem	MESO
Metasystem	META
Microsystem	MICRO
3 Domains:	
Physical body	PHYS -B
Interactional	INTER
Interapsychic	INTRA
Autopoietic	AUTOP
Manipulation	MAN
Marginal voice	MAR
Mental health (dynamic processes)	MEN-H
Multiple factors	MULT
Network session	NET
Newtonian/Relativity	NEW
Observer	OBS
Parental role	PAR
Partnership	PARTNER
Postmodern	POSTM
Pragmatic	PRAG
Prevention	PREV
Internal working model	IWM
Meaning	MEAN
Reductionism	RED
Self-We	I-THOU
Siblings	SIB
Symptoms (psychopathology)	SYMP
Whole system	W-SYST
Joining the system	JOIN
Transfer	TRANS
Avoidance	AV

COGNITIVE CONTROL			
Cognitive controls	COG-C	Equivalence range	EQ
Body-ego-tempo regulation	BODY-EGO	Value judgement	VAL
Focal attention	FOC-A,	Mechanism of defence	DEF
Passive, Narrow	PN	Fantasy	FAN
Field articulation	FIELD ART	Metaphor	MET
Level sharpening	LEV-S	Resistance	RES

4.2.8 DATA CONSOLIDATION AND INTERPRETATION

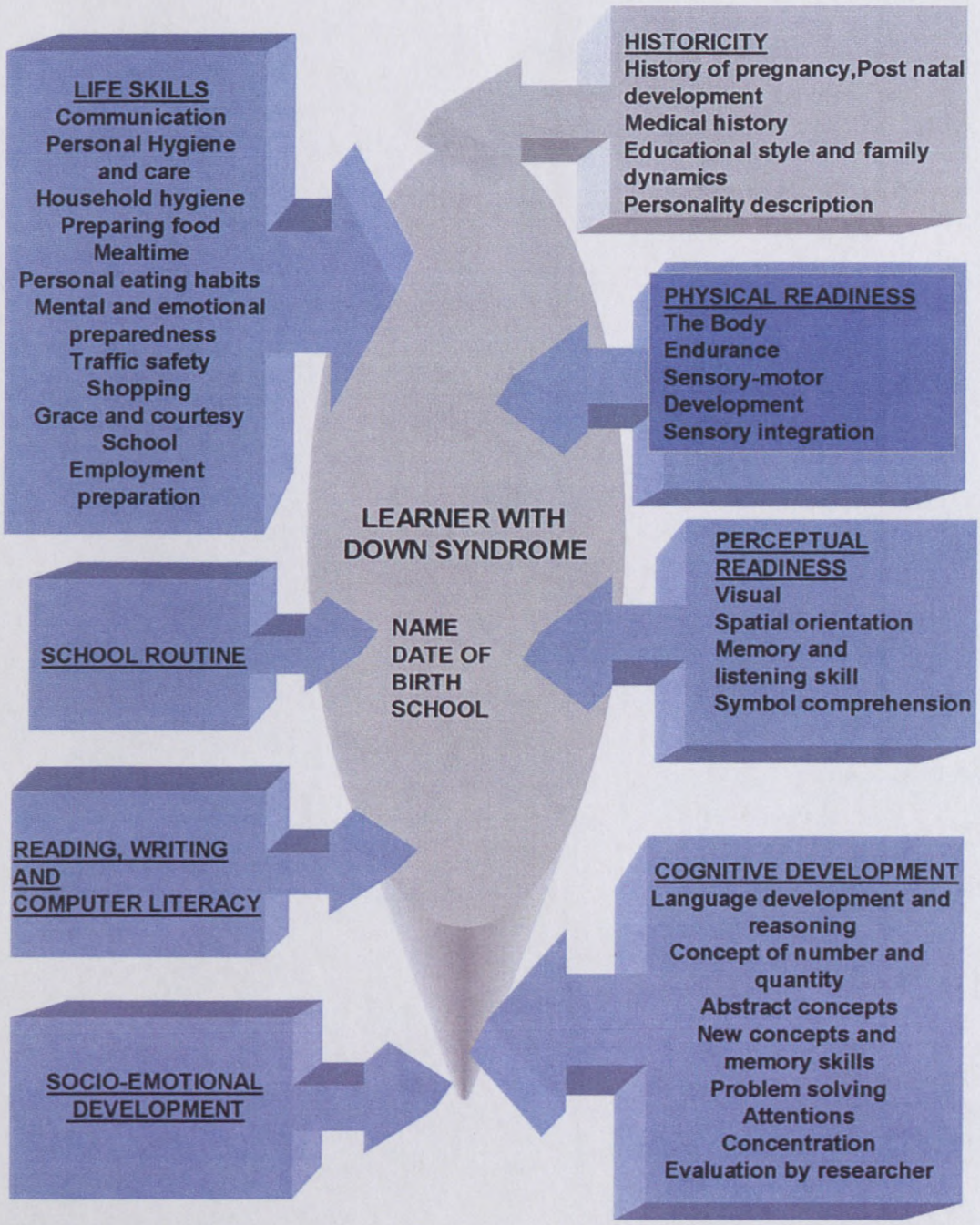
During the study the data was coded and clustered according to the categories within the conceptual framework, which included the literature review about inclusion within the South African context and the role of the educational psychologist in the case of the learner with Down syndrome. Secondly the data from the study was organized within the ecosystemic framework as presented in chapter five. The case studies were regarded as a highly important part of the research report, but the bulk of the data, the focus of the study and ethical reasons, made it more convenient to accommodate the case studies in a case study appendix (Volume B).

Efficient data analysis requires a commitment to theorizing about the data from a consistent model of social reality (Silverman, 2000:151). In this study conclusions were drawn from the observation of themes from an ecosystemic perspective. The strategies of counting and comparing conclusions were used. The final interpretations are presented in chapter six as "final conclusions may not appear until data collection is over, depending on the size of the corpus of field notes; the coding, storage, and retrieval methods used... but they often have been prefigured from the beginning, even when a researcher claims to have been proceeding inductively" (Miles & Huberman, 1994:11,140).

Opinions that emerged from the data need to be evaluated for credibility and validity. Explanations and causality must be backed up by reasons, supporting claims or justifying beliefs. Explanations from researchers often have imperfections, which prompt challenges, responses and argument. The categories and themes should fit the data and should be useful in explaining and interpreting the trend towards theory development. The boundary between general "explanation" and "causality" is assumed to be diffuse (Miles & Huberman, 1994: 100, 144,145).

To put it yet another way, a theory can be seen as a predicted pattern of events (Yin, 1991), which we place alongside what happened to see whether the pattern matches (Miles & Huberman, 1994:145).

FIGURE 14: CONCEPT MAP OF THE CATEGORIES OF THE CASE STUDIES



4.2.9 DATA VERIFICATION

In qualitative research credibility is achieved through prolonged and substantial engagement, persistent observation, peer debriefing, progressive subjectivity, member checks and triangulation. The use of many cases strengthens the external validity of the results. Internal validity is gained by recording all changes occurring during the process of the research. As researcher I became well acquainted with the community, which was studied, and this consequently links between the research and action in the community to be established. I also tried to involve those who were marginalized and to proceed with a high level of critical reflexivity, reciprocity and sharing of benefits (Borg & Gall, 1989:406; Charles, 1995:27,103; Cohen & Minion, 1994:241; Mertens, 1998:185-186; Miles & Huberman, 1994:29; Sherman & Webb, 1988:86).

The process of triangulation, which is defined as "the use of two or more methods of data collection", was followed. The advantage of triangular techniques is their safeguarding against bias and "method-boundedness" as well as their making for a holistic view of educational outcomes from case studies (Cohen & Manion, 1992:270; Cohen & Manion, 1994:269,239-241, Mertens, 1998; Merriam, 1998:204, Silverman, 2000:48-52). As Silverman, 2000:48-52) writes:

> Triangulation refers to the attempt to get a "true" fix on a situation by combining different ways of looking at it or different findings.

The process of triangulation may strengthen reliability and internal validity but the sense of the data in context should not be sacrificed. An attempt was made to retain analytical sense during the process of triangulation by operating from a theoretical perspective and using methods, which provide an account within that perspective. Although it is often hoped that triangulation will reveal the "whole picture", I retained a modest scepticism (Merriam, 1998:207; Silverman, 2000:99).

External validity is confirmed if the findings of the study can be applied to other situations. Causal links are made manifest through notions such as the strength of an association, consistency and specificity within the context of causal complexity. Qualitative analysis is viewed as a powerful method to assess causality as it "deals well with the complex network of events and processes in a situation". It is, however, important that a useful theory should be applicable for more than one can (Miles

& Huberman, 1994:146).

The following suggestions by Eisner and Peshkin (1990:127-134) were considered and incorporated during the research to satisfy the challenge of validity of the qualitative data: I attempted to listen sensitively, not to talk too much, record accurately, commence writing early and report comprehensively. In this study I also tried to exercise disciplined subjectivity and maintain equilibrium between the account and the actual setting. Coding, reflection, clarification of my assumptions and theoretical orientation as well as long-term observation were further attempts made to increase reliability and internal validity (Merriam, 1998:204,206; Miles & Huberman, 1994:57,62).

4.2.10 ETHICAL CONSIDERATIONS

The ethics for psychologists were the guiding principles for all actions taken by me during this research project. The well being of the clients received priority in keeping with the role of the educational psychologist. All final or critical decisions on school placement, where I needed to give input or to intervene, were directed by the perceptions of responsible inclusion in close collaboration with the micro, meso and macro systems. The rights of the parents were acknowledged and their final authority in all decisions concerning the learners was respected (Malloy, 1996).

General ethical principles for research were also adhered to, "...education is, at base, a moral enterprise... qualitative research cannot be value-free" (Eisner & Peshkin, 1990:248,256). The ethical implications were always considered, the participants were placed at minimal risk, I always carried responsibility for my actions during the research, a clear agreement was established with the participants and there was no conscious deception. The individual's freedom was respected and participants were protected from discomfort as far as possible. Participants continually received information on the study and all information was confidential, except for information where informed consent was obtained to be shared or published. The right to privacy, non-participation and confidentiality and the right to expect experimenter responsibility were therefore also respected (Borg & Gall, 1989:84-85; Tuckman, 1994:13).

I maintained a "supportive, counselling and facilitating role" in all dealings with educators, principals, professionals, parents, learners and other stakeholders who were involved. All field notes and personal documents from the case studies were handled in strict confidence and remain the property of I and the client only (Fourie, 1997:43).

4.3 CHAPTER SUMMARY

This chapter included a discussion of the research process of this study. A description of the various components of the study was presented including the literature review, theory framework, practical implementation and research methodology. In Chapter Five the implementation and findings of the study will be discussed.

I tried to tackle the research problem of how to make my work useful for education and psychology. I took action for an oppressed group in the field of educational psychology. The qualitative methodology allows for the understanding of learners in their natural context, which facilitates the educational process and professional educational support. The attempted validity of the study allows for the identification of relevant themes and possible generalizations for the future practice of the educational psychologist. Concerning generalizability Eisner and Peshkin (1990:209) write:

> ...there is a broad agreement that generalizability in the sense of producing laws that apply universally is not a useful standard or obtainable goal for qualitative research"(Eisner & Peshkin, 1990:208). Yet studying "what is", what may be and what could be can increase generalizability and one could generalize from case studies by "seeing how each case, potentially, represents different values of some generic variables or processes.

CHAPTER FIVE
CASE STUDY

> It must be remembered that the object of the world of ideas as a whole (the map or model) is not the portrayal of reality – this would be an utterly impossible task – but rather to provide us with an instrument for finding our way about more easily in the world. H. Vaihinger, The Philosophy of As If (O'Connor & Amman, 1997:1).

5.1 INTRODUCTION

In this chapter I present critical reflections on my perceptions and experiences during this study from an ecosystemic perspective. In general my study was a humbling experience of exploration and enrichment, which, in my view, has implications for the role of the educational psychologist in South Africa. In this chapter I focus on the sub-questions: "What is the role of the educational psychologist in the context of the development of the learner with Down syndrome" and "What role can the educational psychologist play during the process of including the learner with Down syndrome into mainstream education?"

During the process of data analysis the data were categorised in themes and clustered into the various subsystems of the ecosystem. Within the microsystem the data were clustered into the various fields of the evaluation reports, which are described in Point Two, The Microsystem.

Examples of the evaluation report and individual educational programs are presented in the case study appendix. Data on the support to the family and teachers were clustered under the mesosystem. Other roles that the educational psychologist fulfilled outside the micro and mesosystems were clustered under the themes exo- and metasystems. Full details of the workshop programmes and the original evaluation reports are available on request. These documents are not included in this report due to the comprehensive nature of the data.

As discussed in chapter four the project was implemented in three phases:

PHASE 1: THE DESIGN PHASE

Toward the end of 1995, Phase One of the project, the sampling process, was initiated and parents interested in the project were interviewed. After the parents had considered the criteria they joined the project. I communicated with the parents and pre-primary schools, and the parents could choose in which schools they wanted to place their children. Either the research team or the parents themselves mediated the parent's selected local pre-schools of their own choice and placements in these schools. Each of the learners was successfully placed in one of ten different pre-schools. During this phase I also commenced a comprehensive literature review.

PHASE 2: IMPLEMENTATION PHASE – RECEPTION PHASE

In January 1996 the parents were orientated towards the research project and my initial role was negotiated with them. An informal function for the parents, children and research team was organised so that all participants could meet each other. During that evening the parents indicated and diarised a timetable for my meetings with them. As a group, we jointly decided that I would meet with the parents every three weeks. I also arranged a schedule for the initial assessment of the learners with their parents, as well as weekly therapy sessions for the learners. We planned to conduct most of the learners' therapy sessions at the schools. All the schools allocated me a space in the school environment where I could do therapy with the learner and I was given permission to withdraw the learners for therapy. The parents of those living in Randburg and Vanderbijlpark agreed to bring the learners to my private practice at my house on a Saturday. In February 1996, a workshop was organised for the pre-school educators to facilitate support for them and collaboration with each other. During this phase questionnaires were given to the parents and the educators to assess general opinions on relevant issues. I also often liased with the various therapists (such as occupational and speech therapists) who worked with the individual learners. Various workshops were planned for the group of parents. As this phase of the research progressed, therapy was sometimes indicated for other members of the family and these observations were then negotiated with the families. Trans-disciplinary meetings were held with other therapists for collaboration in support of the learners.

During this phase of the project the evaluation reports and the individual educational programmes for each learner were designed and implemented. Parents, educators and other professionals were all requested to contribute information to these documents. During the latter part of this phase, placement options for primary schools for the learners were explored in collaboration with the parents. The concept of "inclusive education" was still foreign to the schools and few principles were conscious of the fact that the South African schools Act permitted learners with special needs to access mainstream schools. Many schools still refused to take learners with special educational needs. The procedure for this was as follows: Firstly the parents chose the school most acceptable to them. Then I met with the parents and the school and the process was initiated. The schools were requested to become part of the research project in the process of addressing the practical challenges of inclusion. A function was held at the end of the year, during which certificates were handed to the learners and the educators at the pre-schools they attended. During the year I also joined various workshops and conferences, which were relevant to the theme of the study. At the end of this phase an additional psychological assessment was conducted with each learner.

PHASE3: IMPLEMENTATION PHASE - FOUNDATION PHASE

During 1997 the learners were placed in Grade 1. For this phase, parent meetings were planned according to their needs. The parents chose how frequently they wanted to see me, either every three weeks or every two months. This timetable was followed for the whole year. During the year I facilitated problem-solving processes for challenges and problems that arose in various systems, such as the school, home or therapeutic systems. In this way I provided support to all the stakeholders involved. Where indicated, other members of the family such as parents or siblings were included in therapeutic sessions. I made video recordings of the learners during various activities in the school setting. I attempted to network at various levels of the ecosystem, for example, with the schools and other professionals. Trans-disciplinary meetings, where placement issues or other issues pertaining to the learner's development were discussed, formed part of this networking process. I presented workshops to the educators and parents based on the needs expressed by the parents. I was also requested to present a workshop for the Department of Education in Gauteng. In November and December 1997 I conducted a final assessment of the

learners with Down syndrome. During this phase of the project I attended the International Down syndrome conference in Madrid, Spain. I liased closely with the Down Syndrome Association of South Africa in all phases of the project and was requested to serve as a member of the Down Syndrome Association of Pretoria in the portfolio of Education. During this year I also presented workshops on inclusion at the invitation of the Down Syndrome Association of Pretoria.

5.2 MICROSYSTEM

Summarised versions of the learner's evaluation reports are provided in the case study annexure. This annexure was created due to the extensive nature of the full database. The concepts for evaluation such as "good", "average" and "weak" as indicated in chapter four may seem to focus on the deficits of the learner and are contradictory to the philosophical base of the study. These concepts however fulfilled the essential purpose of identifying needs to facilitate the design of the learner's support programme within the all-embracing attitude of focusing on the learner's strengths within the educational context. Copies of the comprehensive evaluation report and individualised educational programme booklet are also presented in the case study appendix.

During the implementation of the study, I constantly monitored the various domains of the learner's development in an attempt to facilitate holistic and balanced lifespan development. This required collaborative consultation with other professionals, monitoring progress, and solving problems, as they appeared, through mediation, consultation and networking. Physical problems were frequently discussed with me and I had to fulfil multiple roles such as researcher, reflective practitioner, consultant and mediator.

5.2.1 HISTORY

The learners' general social background was conducive to development. They had all been exposed to efficient medical treatment and most of the learners had received support through early intervention programmes, which facilitated their initial development. Nine of the learners had been living in their parents' homes all their lives and one learner had lived in a residential home for nine years. The last learner

was placed with her parents for the full duration of the project and her parents were comfortable with having her at home. Some families used medication and vitamins (indicated in the individual case study annexure), as recent literature recommends supplements for learners with Down syndrome. The learners were all well cared for, accepted in their homes, and their parents were dedicated to the project. The learners showed individual developmental milestones and personality characteristics.

5.2.2 PHYSICAL DEVELOPMENT

During the study I was constantly motivated to review the literature and reflect on various issues concerning normal development and the development of the learner with Down syndrome. This included questions such as the implications of hearing loss and the possibility of developmental delays other than those only applicable to Down syndrome. Two of the learners revealed the possibility of a double diagnosis, namely Autistic Spectrum Disorder and Down syndrome, although the research applicable to this only became available after the study. I often wondered about the difference between these learners and the general learner with Down syndrome and some Autistic features seemed to be present, but were difficult to explain. It was found that oxygen therapy improved the general functioning of the learners who used it, and vitamin treatment also had a beneficial effect. We consulted with Prof N. Dippenaar who conducted research at Medunsa and indicated that L-Carnitine seemed to improve muscle tone in learners with Down syndrome. The general approach was to review recent literature on vitamins and share the literature with parents, who were encouraged to make decisions with which they would feel comfortable, in collaboration with their doctors. In the case of learner G, interventions for hair loss were often discussed with me and I needed to provide moral support and facilitate the search for further information. During the study the parents and speech therapist discussed with me the sudden occurrence of epilepsy in learner D. The general level of endurance and immunity for illnesses was often a topic of dialogue between me, the parents and professionals. I continuously had to do research on various issues and the individuality of the challenges arising.

One occupational therapist suggested the sensorial integration intervention programme as proposed by Wilbarger (1991) for three of the learners with Down syndrome. The parents agreed to participate and needed to apply the brushing procedure every two hours for a full week. I monitored the findings of the programme

together with the occupational therapist, with varying results. Mediation between the occupational therapist and parents was necessary as the programme placed a lot of emotional strain on the parents. In general, the reaction of the learners was positive. My role as educational psychologist became evident as there was continuous networking between the occupational therapists, the parents and me. It also became evident that I had a role to play in sensorial integration, which implied the need for more research and training in this area. During this study I was privileged as the occupational therapist valued the continuous networking and sharing of information, which enhanced the therapeutic service both of us provided. We also worked towards common goals in therapy within a trans-disciplinary model. During the occupational therapist's presentation of the Wilbarger (1991) sensorial integration programme to some of the learners with Down syndrome, there was frequent interaction between the teachers and me. The occupational therapists also interacted with the teachers with such requests as the learner being provided with a straw during snack time in the classroom to enhance oral integration.

5.2.3 PERCEPTUAL DEVELOPMENT

Concerning perceptual development there was constant monitoring and dialogue with educators and occupational therapists and issues such as visual therapy were discussed. Parents had varying feelings about visual therapy as the impression was created that the learners were not always accurately assessed. In fact, the issue of effective evaluation of the eyesight of the Learners with Down syndrome presented quite a challenge as the learners could not always follow instructions correctly during the eye examination. Although it is usually recommended that an eye specialist do the eye examination, one of the parents discovered an optometrist who was able to effectively examine learners with Down syndrome. The pioneering work of parents sharing knowledge and expertise proved to be vital in the facilitation of primary health care. I was often placed in a position of networking agent, as well as a central database for information or support, which parents found useful.

5.2.4 COGNITIVE DEVELOPMENT

In general all the learners showed an improvement in general attention in therapy. They showed positive improvement in school, and an improvement in their communication skills was observed soon after placement in the mainstream.

Although my spontaneous, natural inclination as an educational psychologist and a researcher leans strongly toward an ecosystemic framework, on reflecting on my role I still sometimes caught myself seeking linear explanations. I had to continuously remind myself of my research framework, and therefore abstain from diagnosing and observing from a reductionism approach of adhering to linear explanations for improvement in performance. During the process of therapeutic support to the learners with Down syndrome, I became conscious of my own internal working model and recognized a deeper shift from a deficit model towards focusing on the complexity of multiple contributing factors. Therefore, although I had practiced from an ecosystemic framework previously, a different dimension thereof became evident during this study. During the second evaluation, an overall impression of improvement in the performance of the learners was observed and the second evaluation also progressed with greater ease than the first. From the perspective of a circularity scientist (refer to chapter three), my role cannot be linked to the progress of the learners directly, but the assumption could be made that my role as psychologist could have contributed to the progress and well being of the learners.

Engelbrecht (1996:205) suggests that learners with special learning needs "first need to acquire effective cognitive strategies for effective learning in order to construct meaning effectively from environmental stimuli" and that is what I attempted to achieve through the Cognitive Control Therapy.

5.2.4.1 Discussion of the assessment of and support of the learners with Down syndrome

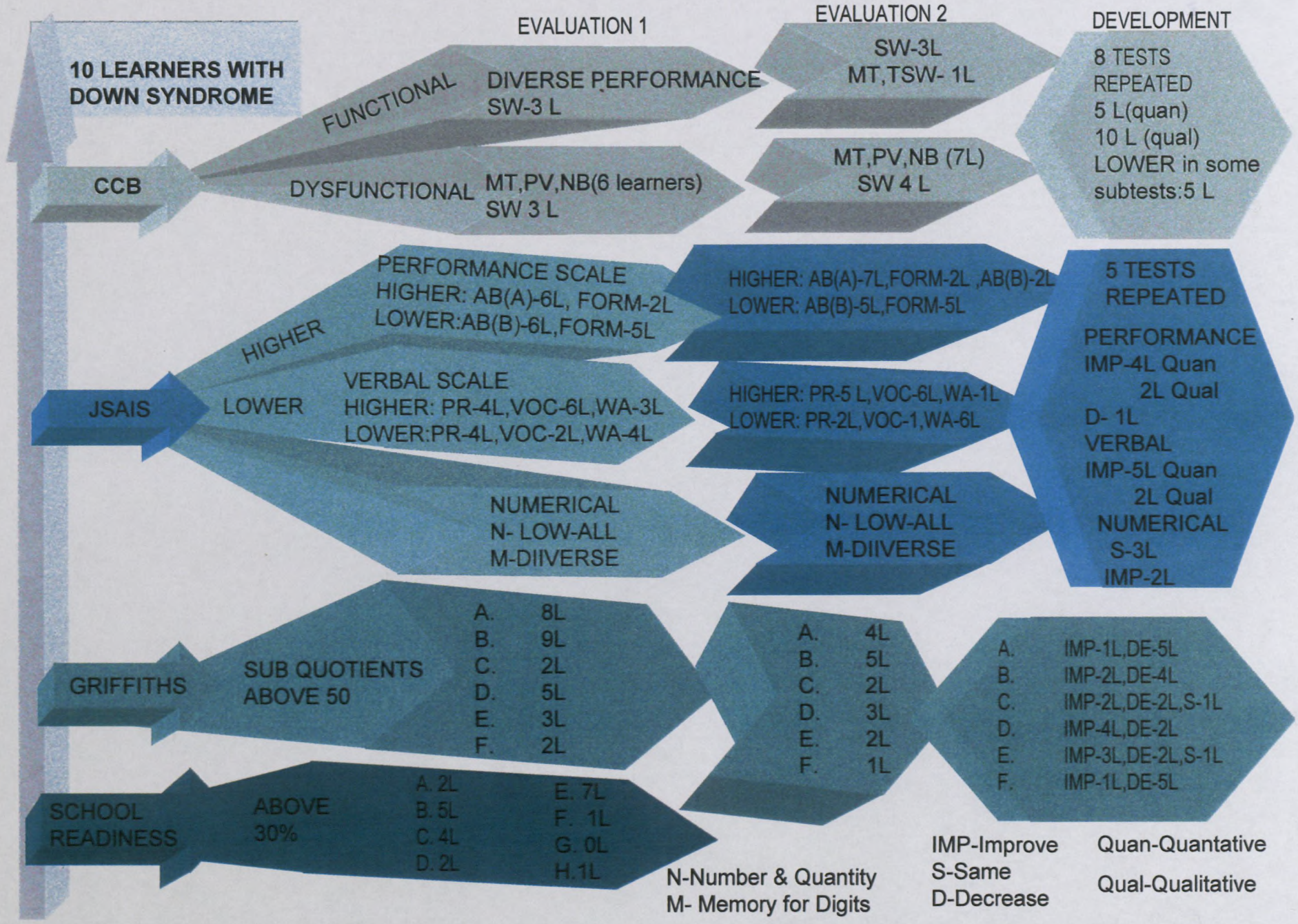
Each learner's performance is discussed individually in the case study appendix (Volume B) under the heading "Evaluation by the Researcher". This discussion focuses on general themes and observations that emerged during the study. Figure 15 provides a display of the possible themes for learners with Down syndrome concerning evaluations one and two of the learners with Down syndrome. The individual tests will be discussed separately.

5.2.4.2 The Junior South African Scales

The results have been displayed in the Profiles (Figures 16a & 16b) and possible themes that emerged from the test results are displayed in the Data displays (Figures 17a & 17b). From this evaluation the following observations were made:

FIGURE 15: ASSESSMENT 1&2 OF THE LEARNERS WITH DOWN SYNDROME

DISPLAY OF POSSIBLE THEMES FOR LEARNERS WITH DOWN SYNDROME



Although the learners were viewed as diverse individuals it was interesting to observe that there could be trends in the performance of the learners which could possibly be attributed to Down syndrome. The learners' ability to attend and level of collaboration improved remarkably from the first to the second evaluation. Firstly a cognitive disability was indicated for all the learners. Generally there seemed to be a tendency for all the learners in this study to perform higher in the Performance scale.

During the **first evaluation** the highest performance was observed in the subtests Absurdities A and the Form Board. Six learners performed at a higher level in the subtest Absurdities A than in other subtests. Two learners performed at a higher level in the subtest Form Board than in other subtests. The lowest performance was observed in the subtest Absurdities B, where six learners performed at a lower level than in the other subtests, and the subtest Form Board, where five learners showed lower performance than in the other subtest.

In the **Verbal Scale** higher performance was generally observed in the subtests Picture Riddles (four learners), Vocabulary (six learners) and Word Association (three learners). Lower scores than in the other subtests of the Verbal Scale were also observed in the subtests Picture Riddles (four learners), Vocabulary (two learners) and Word Association (four learners).

In general, all the learners performed at a lower level in the **Numerical Scale** with all the learners showing low scores in the subtest Number and Quantity and diverse performance indicated in the subtest Memory for Digits.

During **the second evaluation** a generally higher performance was once again observed in the Performance Scales. Compared to other subtests in the Performance Scale seven learners showed a higher performance in the subtest Absurdities A, two learners in the subtest Form Board and two learners in the subtest Absurdities B. A general theme of higher performance in the Subtest Absurdities may be indicated and lower performance in the subtests Form Board and Absurdities B.

FIGURE 16b:JUNIOR SOUTH AFRICAN INDIVIDUAL SCALES (JSAIS)
Boys & Girls: Evaluation 2
Profile sheet (GIQ-8)

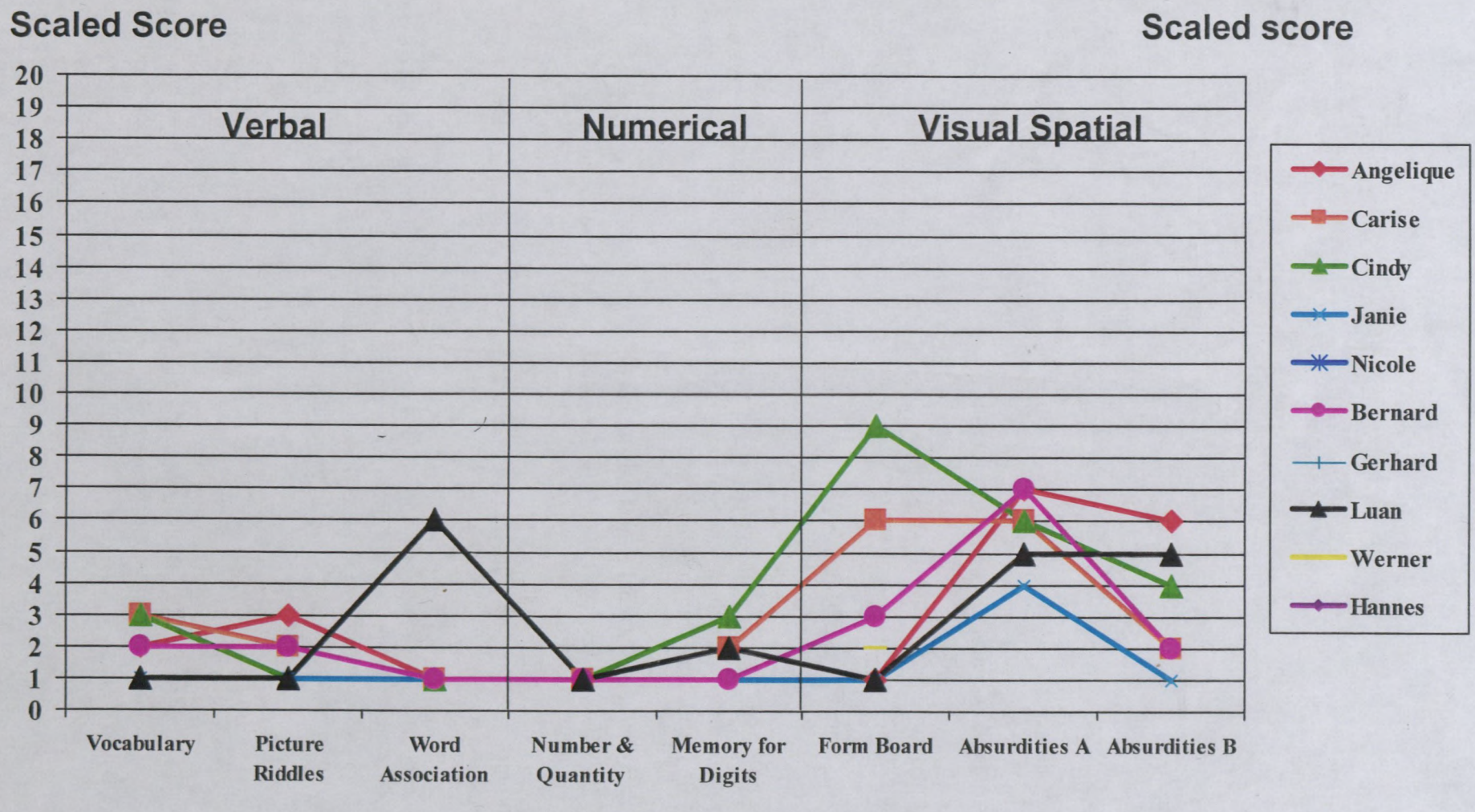


FIGURE 16a: JUNIOR SOUTH AFRICAN INDIVIDUAL SCALES (JSAIS)
Boys & Girls: Evaluation 1
Profile Sheet (GIQ-8)

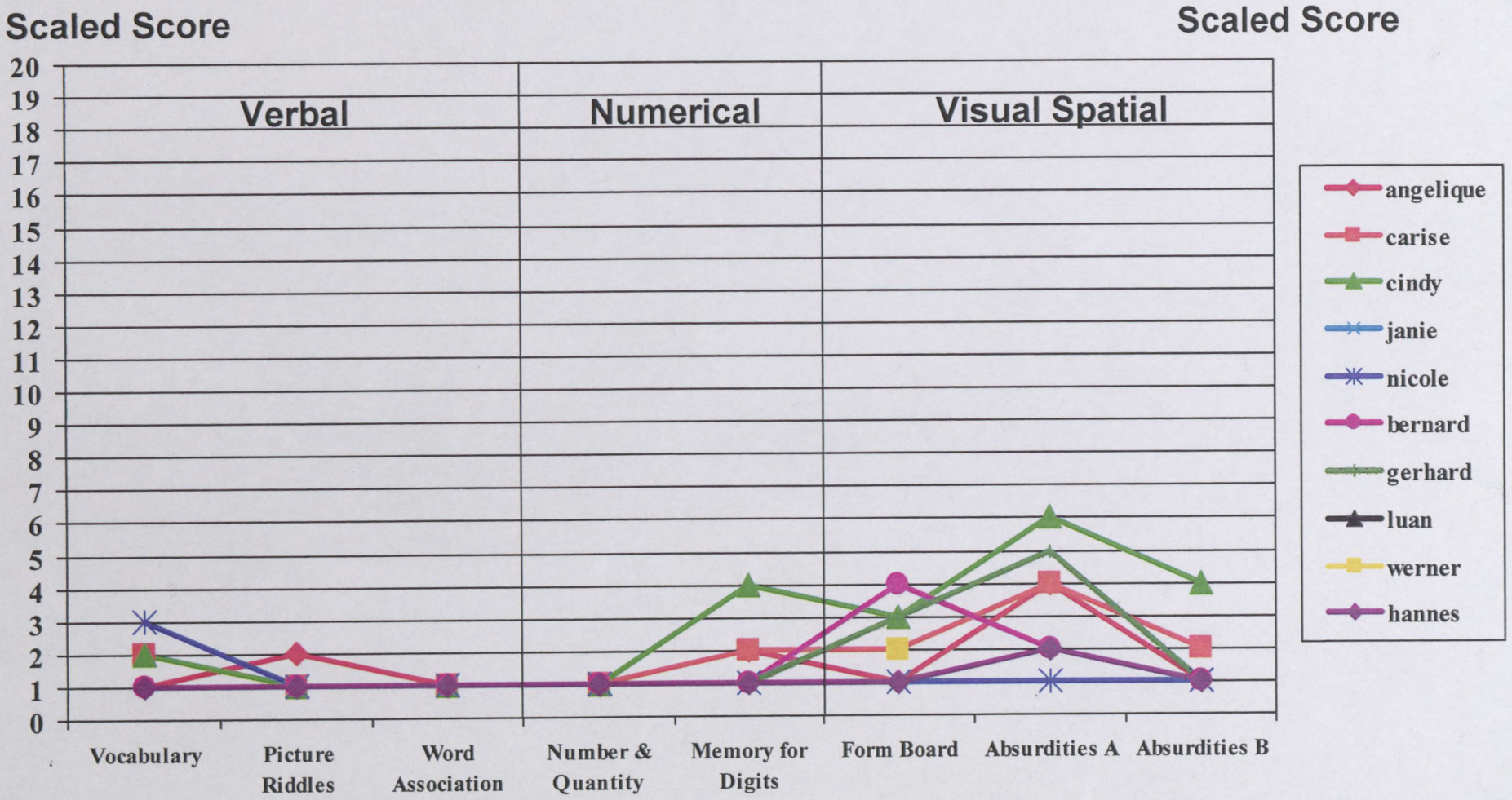


FIGURE 17b: DATA DISPLAY OF THEMES: JSAIS2

HIGHEST

VERBAL SCALE

A.	PR
B.	PR, VOC
C.	VOC,PR
D.	VOC
E.	PR,VOC
F.	VOC
G.	PR,VOC,WA
H.	-
I.	-
J.	WA

PERFORMANCE SCALE

A.	AB(A),AB(B)
B.	AB(A)
C.	AB(A),FORM
D.	AB(A),FORM
E.	-
F.	AB(A)
G.	AB(A)
H.	-
I.	-
J.	AB(A),AB(B)

LOWEST

VERBAL SCALE

A.	VOC,WA
B.	WA
C.	WA
D.	PR, WA
E.	WA
F.	PR,WA
G.	Nothing lower
H.	-
I.	-
J.	VOC,PR

PERFORMANCE SCALE

A.	FORM
B.	AB(B),FORM
C.	AB(B)
D.	AB(B)
E.	-
F.	AB(B),FORM
G.	AB(B),FORM
H.	-
I.	-
J.	FORM

VOC-VOCABULARY
PR- PICTURE RIDDLES
WA- WORD ASSOCIATION
NQ- NUMBER & QUANTITHY
MD- MEMORY FOR DIGITS
FORM- FORM BOARD
AB(A)- ABSURDITIES A
AB(B)- ABSURDITIES B

FIGURE 17b: DATA DISPLAY OF THEMES: JSAIS2

HIGHEST

VERBAL SCALE

A.	PR
B.	PR, VOC
C.	VOC,PR
D.	VOC
E.	PR,VOC
F.	VOC
G.	PR,VOC,WA
H.	-
I.	-
J.	WA

PERFORMANCE SCALE

A.	AB(A),AB(B)
B.	AB(A)
C.	AB(A),FORM
D.	AB(A),FORM
E.	-
F.	AB(A)
G.	AB(A)
H.	-
I.	-
J.	AB(A),AB(B)

LOWEST

VERBAL SCALE

A.	VOC,WA
B.	WA
C.	WA
D.	PR, WA
E.	WA
F.	PR,WA
G.	Nothing lower
H.	-
I.	-
J.	VOC,PR

PERFORMANCE SCALE

A.	FORM
B.	AB(B),FORM
C.	AB(B)
D.	AB(B)
E.	-
F.	AB(B),FORM
G.	AB(B),FORM
H.	-
I.	-
J.	FORM

VOC-VOCABULARY
PR- PICTURE RIDDLES
WA- WORD ASSOCIATION
NQ- NUMBER & QUANTITHY
MD- MEMORY FOR DIGITS
FORM- FORM BOARD
AB(A)- ABSURDITIES A
AB(B)- ABSURDITIES B

FIGURE 17a: DATA DISPLAY OF THEMES: JSAIS1

HIGHEST

VERBAL SCALE

A. PR
B. PR, VOC,WA
C. VOC
D. VOC
E. PR,VOC,WA
F. PR, VOC,WA
G. -
H. VOC
I. -
J. -

PERFORMANCE SCALE

A. AB(A)
B. FORM
C. AB(A)
D. AB(A)
E. AB(A)
F. AB(A)
G. -
H. AB(A), FORM,AB(B)
I. -
J. -

LOWEST

VERBAL SCALE

A. VOC,WA
B. Nothing lower
C. PR, WA
D. PR, WA
E. Nothing lower
F. Nothing lower
G. ALL
H. PR,WA
I. PR,VOC
J. -

PERFORMANCE SCALE

A. AB(B),FORM
B. AB(A),AB(B)
C. AB(B),FORM
D. AB(B),FORM
E. AB(B),FORM
F. AB(B),FORM
G. -
H. Nothing lower
I. -
J. -

VOC-VOCABULARY
PR- PICTURE RIDDLES
WA- WORD ASSOCIATION
NQ- NUMBER & QUANTITHY
MD- MEMORY FOR DIGITS
FORM-FORM BOARD
AB(A)- ABSURDITIES A
AB(B)-ABSURDITIES B

For the subtest Absurdities A the majority of the learners therefore showed a stronger ability in tasks that require correctness of units of figural information, visual memory, visual perception and the ability to discriminate visually. Concentration and practical inclination also play a role. The ability to identify and isolate the absence of essential rather than non-essential details represents a significant aspect of intellectual functioning. This skill could possibly relate to the learner's sense of humour and ability to manipulate socially.

A weaker performance was generally observed for the subtest Form Board, which measures perception of form, including skills such as the recognition, comprehension and manipulation of three-dimensional figural stimuli. Form discrimination, visual organisational ability and psychomotor dexterity also play a role in this subtest. Work-habits, temperament characteristics and problem-solving strategies may also be observed during the administration of this subtest.

The lower performance in the subtest Absurdities B indicates possible difficulties in the ability to notice absurdities in visual material. It also indicates that cognitive growth is related to that which the learner finds surprising (Madge, 1981).
The general performance in the **Verbal Scale** was lower than in the Performance Scale. Higher scores were generally observed in the subtests Picture Riddles (five learners), Vocabulary (six learners) and Word Association (one learner). Lower scores were observed in the subtests Picture Riddles (two learners), Vocabulary (one learner) and Word Association (six learners). A theme seems to emerge towards higher performance in the subtest Vocabulary and lower performance in the subtest Word Association for the learners with Down syndrome in this study.

Six learners therefore showed a stronger ability in the recognition and interpretation of verbal symbols and basic receptive vocabulary. Five showed a stronger ability in concrete practical judgement. Six learners showed a lower score in the subtest Word Association where the learner's performance is measured in associative ability, conceptual thinking and verbal fluency, which is indicated as essential for school progress and viewed as an important aspect of intelligence. One learner showed a higher performance in the subtest Word Association than in the other subtests of the Verbal scale. This learner had received intensive language stimulation from an early age, which could have contributed to this level of performance.

Five tests were repeated and four learners showed quantitative improvement and two learners qualitative improvement in the Performance Scales. In the Verbal Scales five learners showed quantitative improvement from the first to the second evaluation. In the Numerical Scale the performance of three learners remained the same and two learners showed quantitative improvement.

5.2.4.3 The Griffiths Mental Developmental Scales

The profiles for the individual assessments can be observed in Figures 18a and 18b. A data display of themes observed where learners performed according to sub-quotients above 50 in the subtests is presented in Figure 19.

During **evaluation one** eight learners performed above a sub-quotient of 50 in the subtest Locomotor and nine learners in the subtest Personal Social. These subtests measure physical development and personal social development. Five learners performed above a sub-quotient of 50 in the subtest Eye Hand Co-ordination.

During **evaluation two** only six learners could be evaluated. Four learners performed above a sub-quotient of 50 in the subtests Locomotor and five learners in the subtests Personal Social. On closer examination of possible development in the performance of the learner it was observed that one learner improved on the subtest Locomotor and five learners showed a decline in their performance in this subtest. Two learners showed improved performance in the subtest Personal Social and four learners showed a decline in performance in this subtest. Two learners showed improvement in the subtest Hearing and Speech and two showed a decline in performance. One learner's performance remained the same in this subtest. Four learners showed improvement in the subtest Eye-hand co-ordination and two learners showed a decline in performance in this subtest. Three learners showed an improvement in their performance in the subtest Performance and two learners showed a decline in their performance in this subtest. One learner's performance remained at the same level for the subtest Performance. In the subtest Practical Reasoning one learner showed improved performance and five learners showed a decline in their performance.

FIGURE 18b: GRIFFITHS MENTAL DEVELOPMENTAL SCALES
Boys & Girls:Evaluation 2 (Profile)

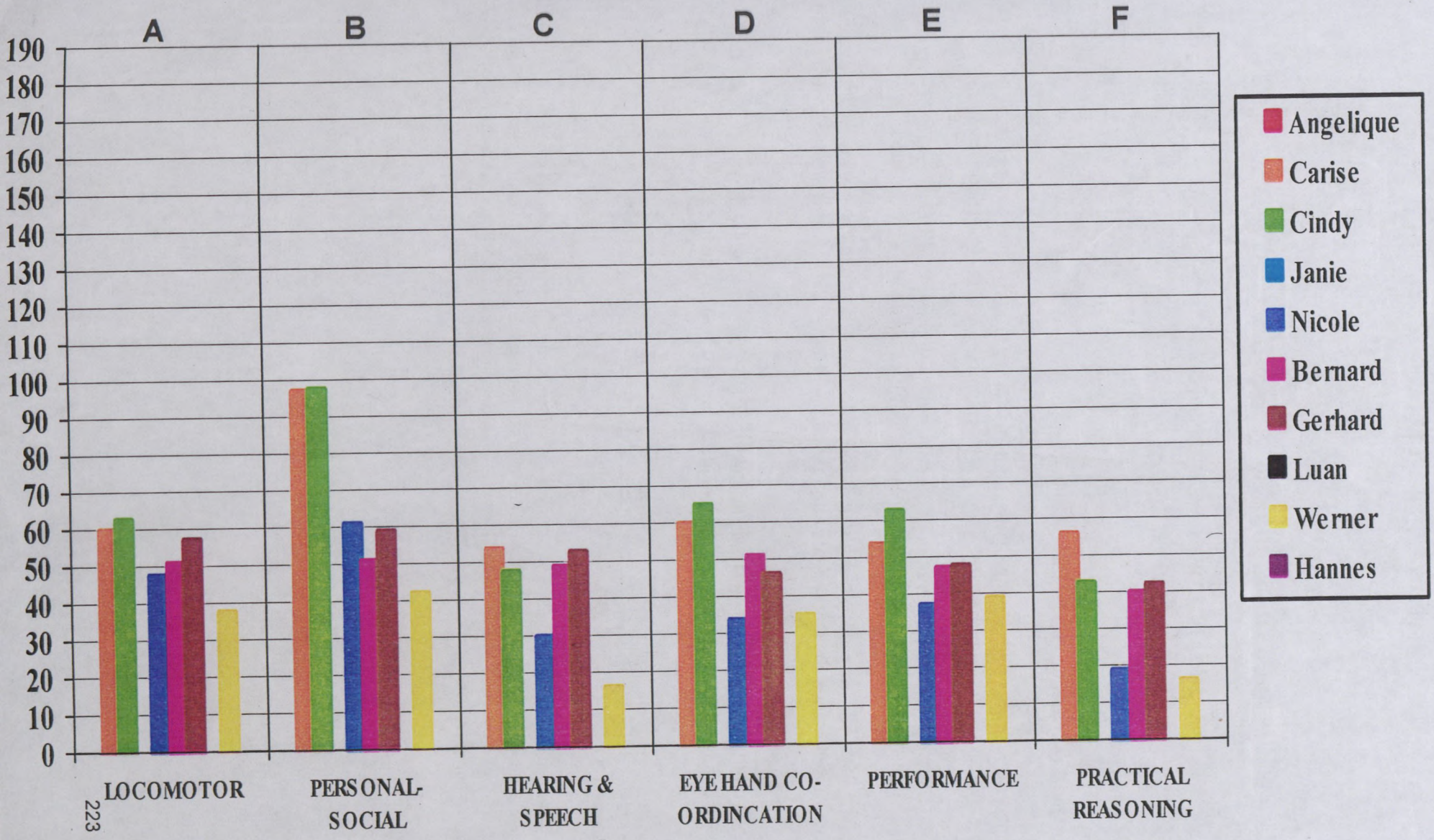


FIGURE 18a: GRIFFITHS MENTAL DEVELOPMENTAL SCALES
Boys & Girls:Evaluation 1 (Profile)

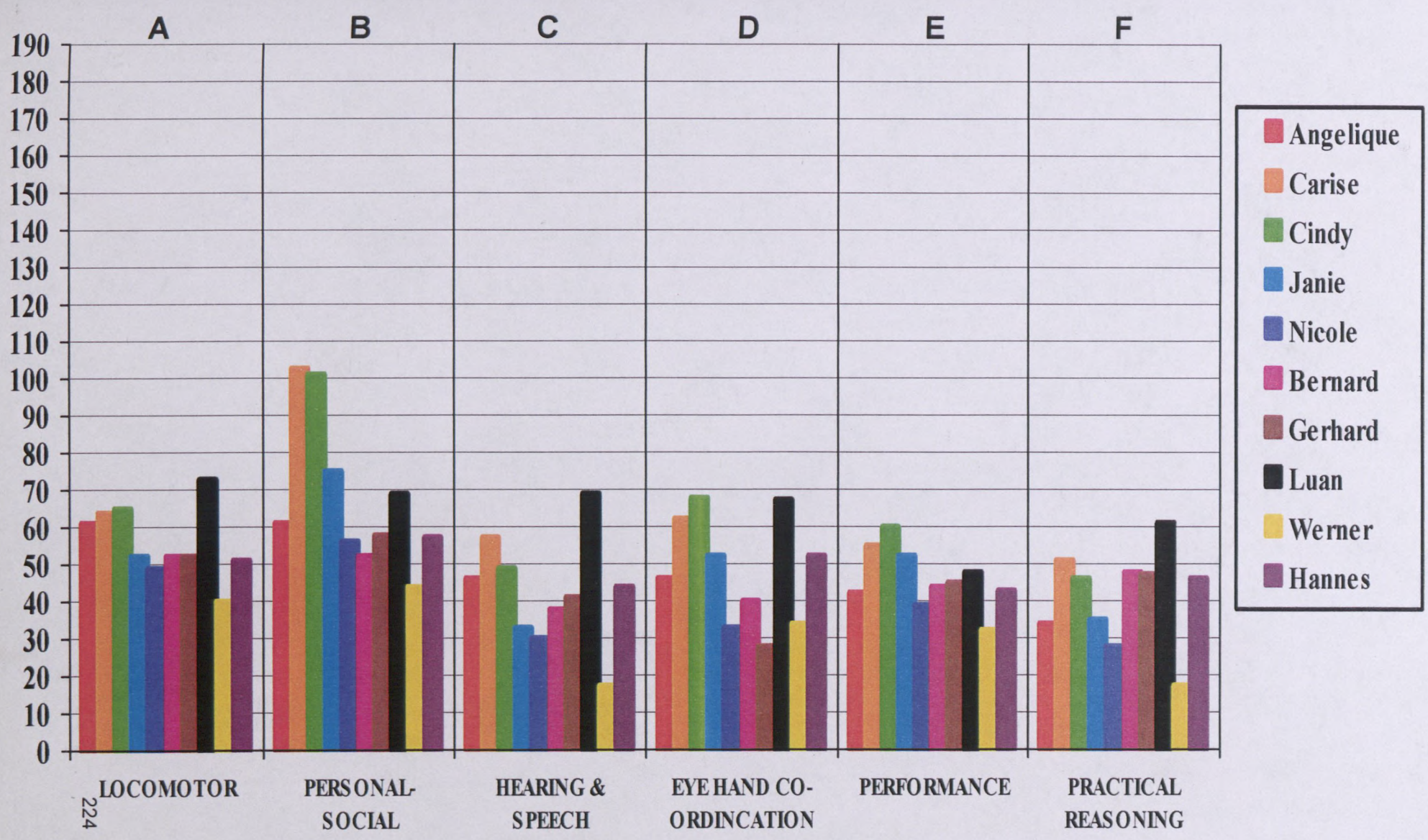
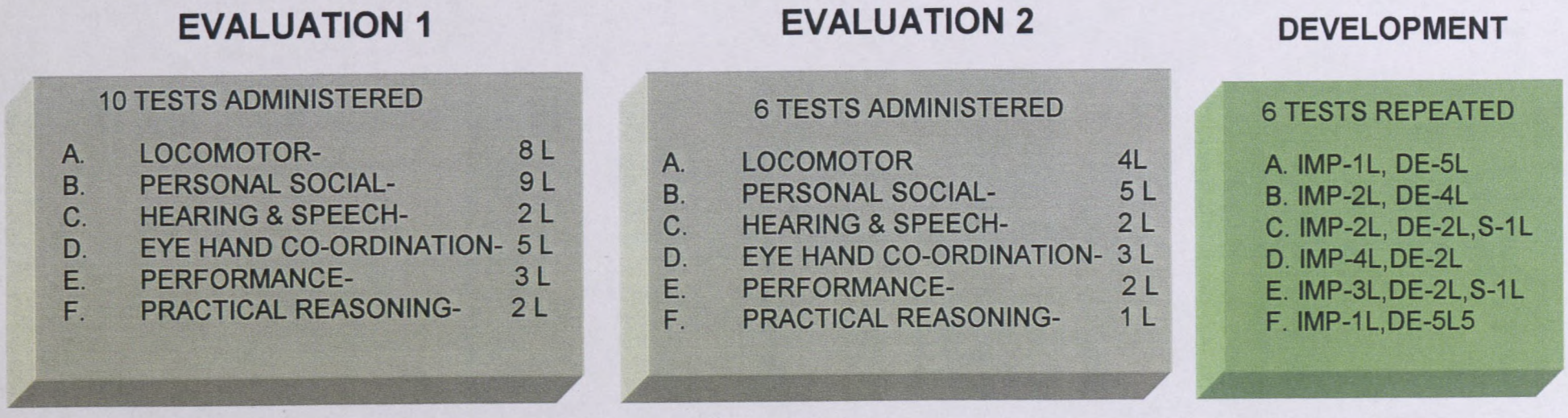


FIGURE 19: GRIFFITHS MENTAL DEVELOPMENTAL SCALES
DISPLAY OF THE THEMES OBSERVED:NUMBER OF LEARNERS WITH SUB QUOTIENTS ABOVE 50 IN THE SUBTESTS



L- LEARNERS
A- LOCOMOTOR
B- PERSONAL SOCIA
C- HEARING & SPEECH

D- EYE HAND CO-ORDINATION
E- PERFORMANCE
F- PRACTICAL REASONING

IMP- IMPROVE
DE- DECLINE IN PERFORMANCE
S- SAME PERFORMANCE

FIGURE 20: GROUP TEST FOR SCHOOL READINESS (UNIVERSITY OF PRETORIA) Boys and Girls (Profile)

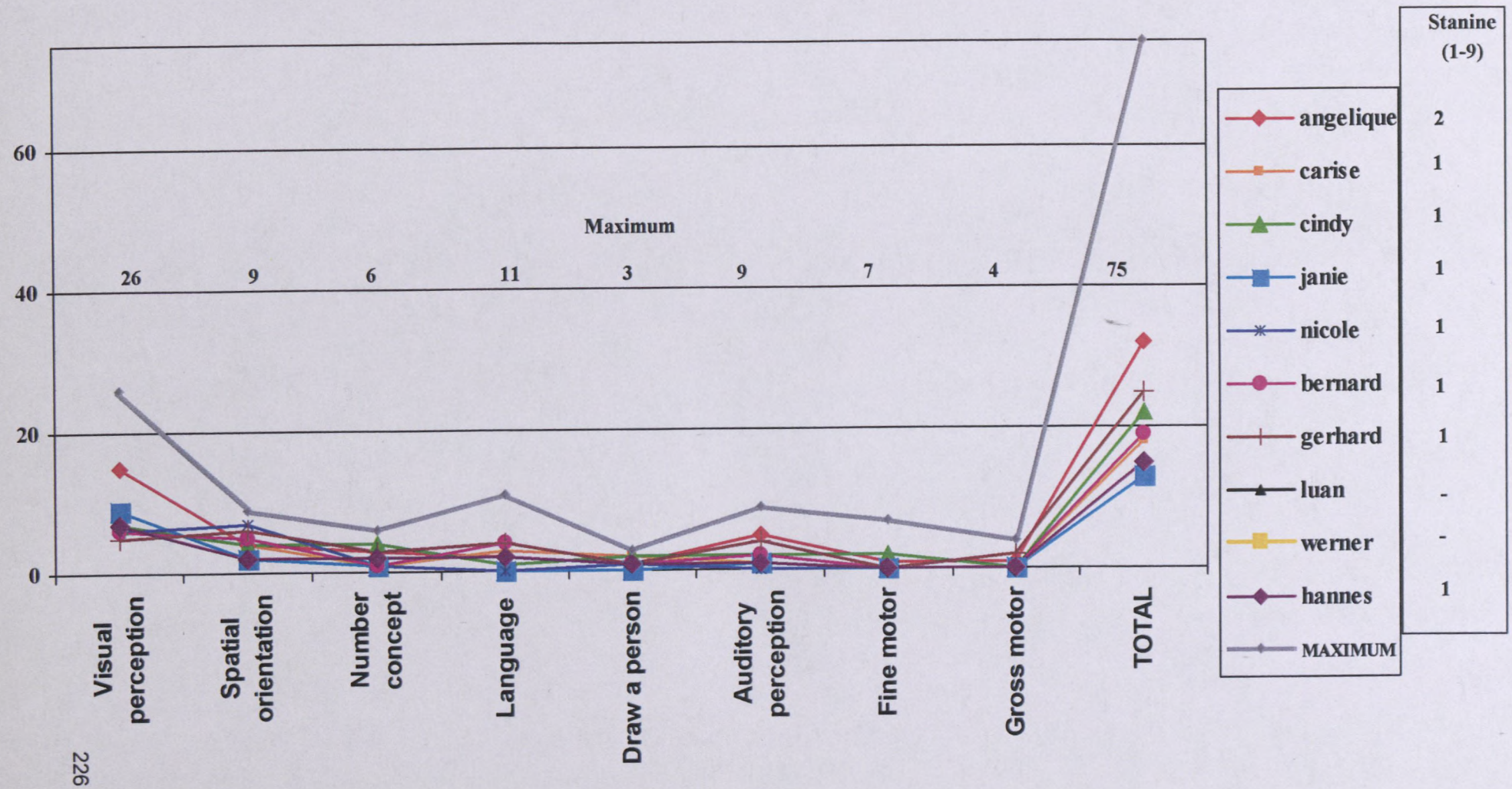
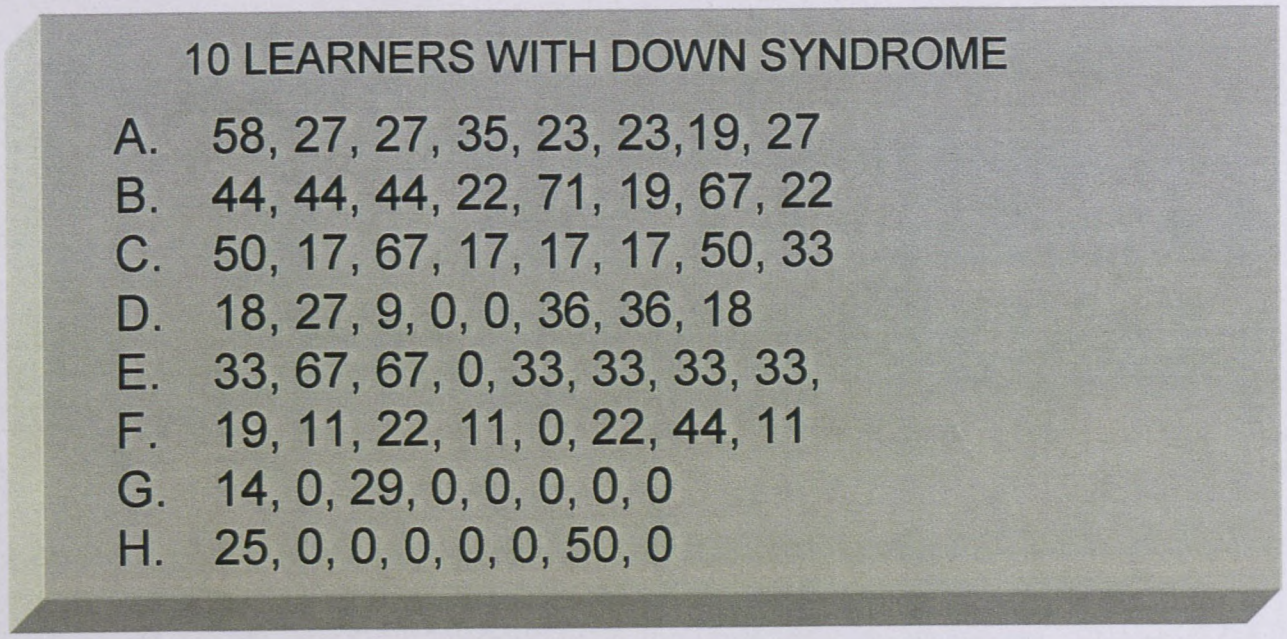


FIGURE 21: GROUP TEST FOR SCHOOL READINESS DISPLAY
SUBTEST SCORES WERE CALCULATED TO A PERCENTAGE TO ALLOW FOR COMPARISON



A. VISUAL PERCEPTION
B. SPATIAL ORIENTATION
C. NUMBER CONCEPT
D. LANGUAGE
E. DRAW A PERSON
F. AUDITORY PERCEPTION
G. FINE MOTOR
H. GROSS MOTOR

In conclusion, it seems that learners with Down syndrome generally show strengths in their performance in the subtests Personal Social and Locomotor with diversity in their performance in the other subscales. This performance correlates with the general tendency toward an interpersonal intelligence, as described by Gardner (1985). Strengths in locomotor performance could possibly also be the result of early intervention and specifically, occupational therapy. The decline in performance could have been influenced by the chronological age used in the calculation of the sub-quotient, as the learners were several months older during the second evaluation. Although their level of performance could have remained the same or improved, lower sub-quotient would be reached due to the number of months their chronological age had increased.

5.2.4.4 The Group Test For School Readiness: University of Pretoria

A display of the themes observed for this evaluation is shown in Figure 20 and the profiles of the individual learners is shown in Figure 21. The subtest scores were calculated to percentages to facilitate comparison between the various scores. The highest scores were observed in the subtest Draw a Person, where seven learners performed above 30%. In the subtest Spatial Orientation, five learners performed above 30%. The lowest performance was observed in the subtests Fine Motor Co-ordination, Auditory Perception and Gross Motor.

It is interesting to note that in the subtest Locomotor in the Griffiths Developmental Scales, there was a general tendency towards a higher performance and in this evaluation the learners showed a very low level of performance in gross motor activities. Although the subtests cannot be compared as such, there is some similarity. In my perception, however, the Gross Motor subtest in the Group Test for School Readiness presented too few items to give a fair indication of the learners' potential, whereas the Griffiths Mental Developmental scales provided several items at various levels.

In summary, it was observed that there were some trends in the performance of the learners with Down syndrome, with the influence of early intervention possibly contributing to some of the strengths observed. I once again became aware of the caution the professional psychologist has to exhibit in the administration and evaluation of psychological tests. I also realised that psychological tests have a role to play towards diagnosis and support, also from an ecosystemic perspective within

a postmodern discourse. An important theme that emerged was that Down syndrome as a phenomenon could be explored through the ethical use of psychological tests to discover particular themes in the learners' functioning. Qualitative observations of the learners during evaluation were extremely important and provided me with valuable information on the learning style, temperament and coping strategies of the learners. The context of evaluation could be used to enhance errorless learning depending on the way in which the psychologist creates rapport with and adapts to the learner, without sacrificing standardised principles of evaluation. Learners that initially seemed very difficult to evaluate were later extremely co-operative due to the relationship created with them. This has implications for the initial evaluation of learners, as a psychologist who does not know a learner may show different test results from those of a psychologist with whom the learners are familiar.

5.2.4.5 The Cognitive Control Battery and Therapy

Figure 22(a & b) provides the display of the themes observed in the scattered scanning test profiles. This discussion will be placed within the context of the model of cognitive control of Santostefano (1988).

During evaluation one, diverse performance was observed for functional performance, as one would expect with individual learners. There were three learners who showed functional performance in the length of a single visual sweep. Six learners showed dysfunctional performance in Motor Tempo, a passive vigour of scanning and narrow breadth of expansiveness of scanning. This indicates developmentally early global diffuse organization of the cognitive controls for this group, which may indicate a pattern for learners with Down syndrome in body ego-tempo regulation and focal attention.

For evaluation two, four learners performed at a functional level for the length of a single visual sweep. This included the three learners from the first evaluation as well as an additional learner. Concerning dysfunctional performance, seven learners showed dysfunctional motor tempo, passive vigour of scanning, and narrow breadth of expansiveness. Four learners also presented with dysfunctional performance concerning the length of a single visual sweep. During this evaluation a pattern for learners with Down syndrome once again emerged, indicating a tendency towards dysfunctional motor tempo, passive vigour of scanning and narrow breadth of

expansiveness for scanning as viewed in the graphs for evaluation one and two. During the second evaluation, eight tests were repeated. Five learners showed progress in a diversity of subtests at a quantitative level and ten learners showed progress at a qualitative level. Five learners performed lower in some of the subtests. The importance of qualitative observation was once again indicated by the results of the evaluation. It was also evident that one session per week was insufficient to facilitate intensive progress. The learners would have benefited more from two sessions a week. There was an indication that learners with Down syndrome possibly tended towards a stage of globalness and a lack of integration in cognitive controls, which may influence adaptation to the environment.

The learners showed varying cognitive control motility (ability to handle short-term changes). In general, when observing the learners' poor performance in a test situation, dysfunctional cognitive control was indicated, but this behaviour may have been attempts to cope with environmental fluctuations or requirements. It seemed as though the learners' perception of frequent failure could have influenced their performance. Their behaviour changed towards more active participation in the process of therapy, which could be an indication that the relationship they developed with me over the two years could have generated a feeling of success and a more positive concept of themselves, which facilitated overall test behaviour. Through my relationship with the learners I got to know a part of their inner world, with the increasing realisation that I knew only a small part of them, and that we need to be extremely cautious when we make deductions about their (or any learner's) emotional life or cognitive controls. In various aspects each individual learner seemed to have become a master of his/her own cognitive-affective coordination, which then developed into patterns of behaviour. Through these patterns of behaviour they seemed to coordinate their effect on and requirements from the environment. For instance one learner would often say "stupid" in a joking manner as a response to any question or instruction. Once I learnt to understand her better, I realised that she possibly gave this response as a way of coping with being embarrassed about her inadequacies. The act of engaging socially to avoid a task (a frequent response by the learners in the study), or becoming the class clown could also have been attempts by the learners to deal with their own perception (internal working model) of personal inadequacies.

FIGURE 22b: COGNITIVE CONTROL BATTERY
Boys & Girls: Evaluation 2 (1997)
Scattered Scanning Test (Profile)

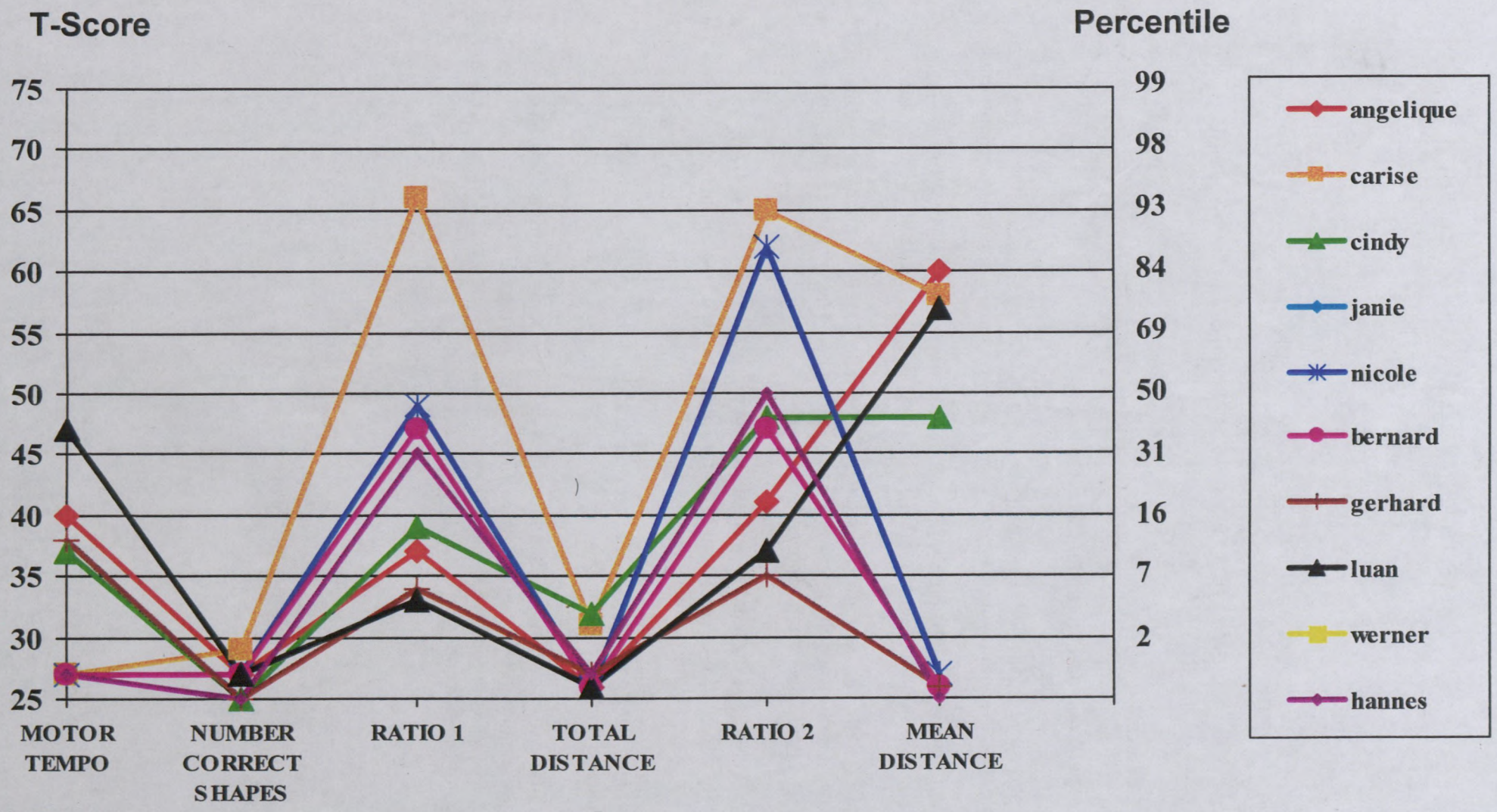


FIGURE 22a: COGNITIVE CONTROL BATTERY
Boys & Girls: Evaluation 1 (1996)
Scattered Scanning Test (Profile)

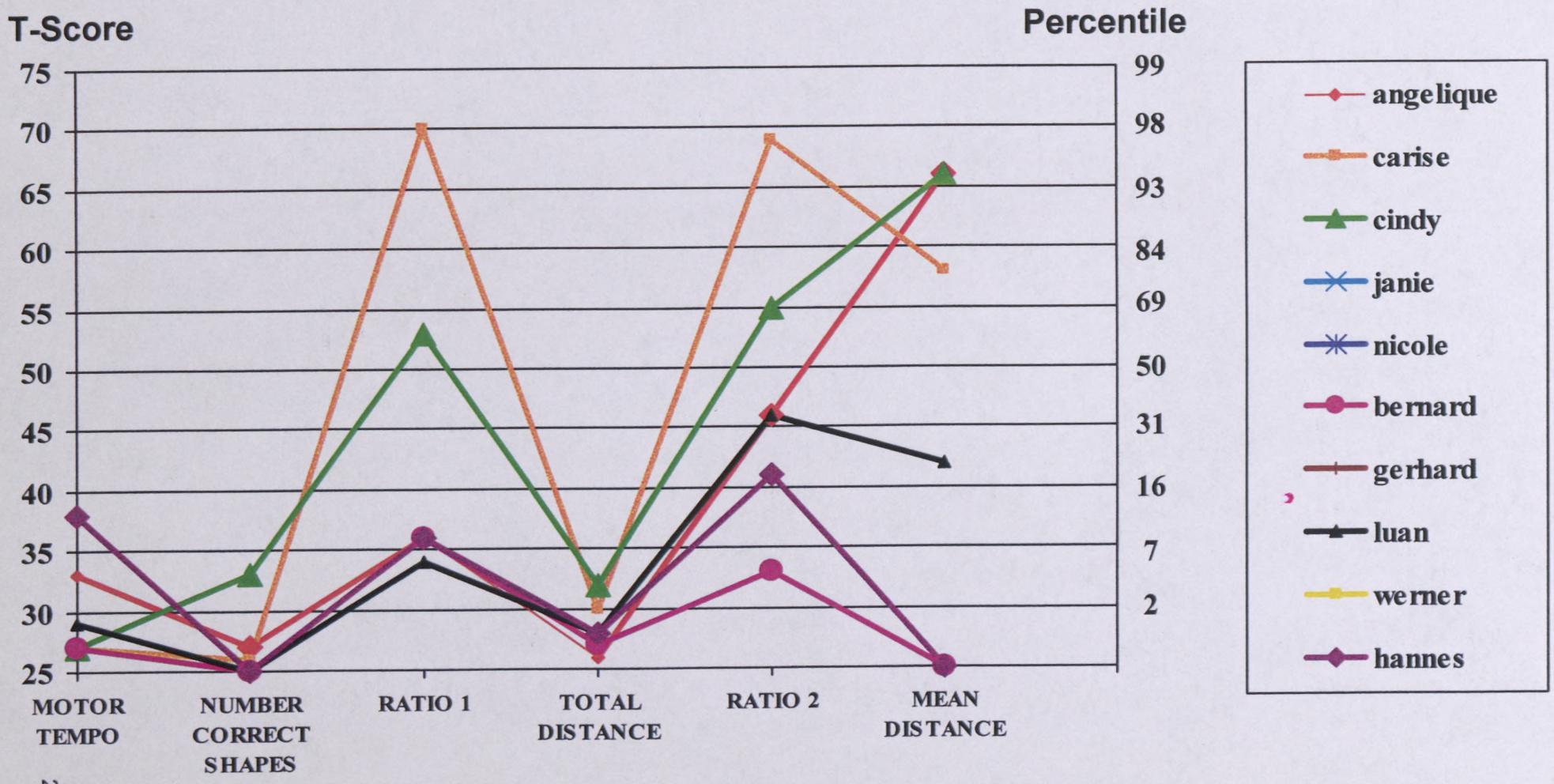
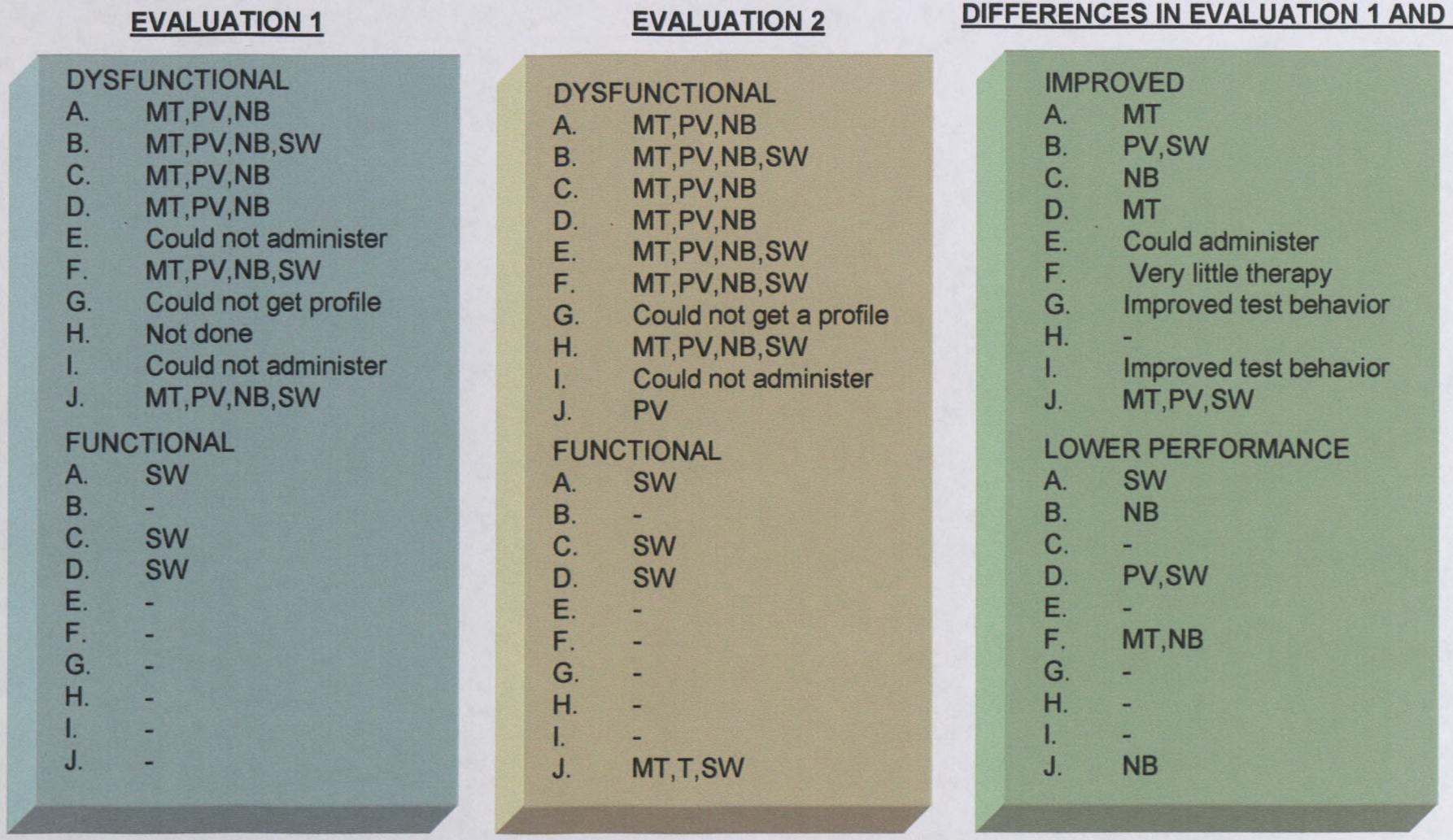


FIGURE 23:COGNITIVE CONTROL BATTERY EVALUATIONS 1&2
DISPLAY OF THE THEMES OBSERVED IN THE SCATTERED SCANNING TEST PROFILES



BET-BODY EGO TEMPO REGULATION
MT- MOTOR TEMPO
FOA-FOCAL ATTENTION
PV-PASSIVE VIGOR OF SCANNING
A,B,C,D,E,F,G,H,I,J-INDIVIDUAL
LEARNERS WITH DOWN SYNDROME

NB-NARROW BREADTH OF EXPANSIVENESS
SW- LENGTH OF A SINGLE VISUAL SWEEP
FA- FIELD ARTICULATION
LS- LEVEL SHARPENING

According to the criteria described by Santostefano (1988:83), the results of these evaluations indicated dysfunctional cognitive control, which means that the learners may be using a cognitive control level which is not synchronized with developmental expectations, often resulting from a mismatch in the individual's functioning and the pace/complexity of environmental stimulation in his/her environment.

> A [dysfunctional] cognitive style is part of a child's network of psychological defences and coping strategies, which have evolved to manage the child's unique vulnerability to the demands for information. This vulnerability is associated with the child's pathological state and maladaptations. In summary a [dysfunctional] cognitive style is defined by discordance among the levels of maturity of each cognitive control and a significantly high frequency of slips of cognition (Santostefano, 1988:83).

During the study it became evident that each of the learners had developed their own coping strategies to manage their vulnerabilities and from an ecosystemic perspective it would not be possible to indicate where Down syndrome was the contributing factor and where affective adaptation contributed to dysfunctional adaptations. On reflection, I constantly had to remind myself of the interrelatedness and multiplicity of causal factors and became increasingly aware of how the educational and support professions continuously oversimplified or reduced this context from a medical model. I was constantly conscious of the fact that a specific self-statement such as "I can't" may have several meanings, or several statements may convey a single meaning such as "I feel inadequate or different to others". I needed to consider surface and deep cognitive structures to understand the meanings of the statements of the individual learners with Down syndrome. I also needed to focus on the adaptive meaning of the learners' irrational/rational thoughts. These reflections were done within the assumption that beliefs could possibly be formed prior to the full development of language and can be structured by different behavioural structures. I came to the conclusion that the learner with Down syndrome's difficulties in accessing language may inhibit self-report and the learner therefore needs to use other behavioural modes, which were dominant when the particular experience was encoded, such as mannerisms or social engagement. It was often apparent that much more information was taken in and understood by the learners with Down syndrome than they could express their understanding of. At times they would reveal their understanding or insight, proving that their level of input and insight was underestimated (Santostefano, 1985:7).

Through observation and reflection it became clear to me that the complexity of the

dynamics of the first years of life for a learner with a disability is underestimated and needs more study and support, and much of the dynamics observed inter- and intra-psychically in the various subsystems originates during this phase. This would include the exploration of the Learners with Down syndrome's internal working model of self and of the dyadic relationships. The parents' internal working models also need to be explored in greater depth because of the impact of the dyadic relationship on both the learner with Down syndrome and the parents. O'Connor and Ammen (1997) found that we need to be very cautious in the assumptions we make about the learner with Down syndrome (and for that matter probably for any other learner we support as psychologists). There are indications that the deeper nonverbal cognitive structures of the Learners with Down syndrome are deficient and the therapy was an attempt to rehabilitate cognitive structures within personality at all levels. But we need to be cautious not to impose our definition of "deficiency and dysfunction" from a reductionist approach (Santostefano, 1985:7). In this study, my goal was therefore to facilitate development rather than change, which has different practical implications. My awareness that the learner with Down syndrome and his/her parents were the experts on him/her became more intense during this study with the simultaneous and continuous awareness that although the therapy and tests were meaningful, their limitations needed to be understood in depth. For true understanding of the learner with Down syndrome, I, as the psychologist, needed a specific kind of humility and respect, as associated with "Taoistic knowing"[5]. All this seems logical and implied in the role of every psychologist, but I constructed a new, deepened meaning to this during my study. I truly attempted to facilitate development at all levels and continuously realised that the majority of the systems we support finds it difficult not to act from a reductionist point of view and that psychologists actually have an enormous task, as a typically medical model constructs many of the problems encountered during this study. These problems are then often reduced to consequences of the process of adaptation of the learner with Down syndrome during the process of inclusion into the mainstream, instead of considering the multiple causal factors.

When considering the principle of directiveness, it is suggested that the controls are interrelated and interdependent. The adaptive process includes a reciprocal relationship adaptation is indicated through a sudden shift in the environment which may affect the between the individual and the environment over a long period of time.

5 Discussed in chapter three 3.2.2. "Taoistic knowing" is described as a respective openness

Short-term pace and complexity of the stimulation. A learner may need to regress to previous levels of cognitive organization and this may be described as cognitive control mobility and is influenced by various factors. From the age of five, the cognitive controls become oriented toward external information and this gradually enables the control of fantasies. In the context of this model it is difficult to make accurate assumptions about the cognitive control motility of the learner with Down syndrome as the constitutional makeup of individuals with Down syndrome still has mysteries, as observed in the literature. I also found that it was difficult to establish a specific "developmental phase" for the learners with Down syndrome in this study. Firstly, as there seemed to be differences in the phases of the various dimensions, namely cognitive, conative, affective, social and physical and, secondly, within the context of the debate between "different or slower development" of the learner with Down syndrome (Santostefano, 1988:10, 11). On the surface there seemed to be a general delay in cognitive development, but from the context of multiple intelligences, several of the learners showed strengths in interpersonal intelligence. Strengths were also observed in maintaining a good sense of humour and manipulation, which, to my understanding, are higher cognitive functions. The interests of the learners indicated that their emotional development was not necessarily at a different level than that of their peers of a chronologically similar age. Due to multiple variables playing a role in the development of the learner with Down syndrome, I was extremely cautious to make assumptions about seemingly "maladaptive/inadequate" behaviour as this behaviour could be an attempt towards adaptation. It became evident that the role of cognitive-affective coordination played an important role toward cognitive motility and what I or other educators perceived as maladaptive could be adaptive for the learner during cognitive-affective coordination. In my perception it became evident that stress was constructed due to possible clashes between the developmental status of a particular cognitive structure and the complexity of the information that needed to be co-ordinated. Breakdown of successful coordination between internal and external stimuli could have contributed to the cognitive slips often observed during assessment, therapy or school situations. Emotions and fantasies could then have dominated, leading to dysfunctions in attention. These dysfunctions are therefore not necessarily linearly related to Down syndrome, but to the individual learner's unique cognitive-affective coordination which had evolved into a specific cognitive style specific for that learner in the study, to manage his/her individual vulnerability to the demands of internal and external information. During the study it was evident that each learner had developed his/her own coping strategies in an attempt to reduce

stress. Although an ecosystemic perspective within postmodern thought might move away from Santostefano's (1988:11, 83) description of cognitive style as being part of a learner's network of psychological defences and a focus on "ineffective/malfunction/pathological" cognitive style, this theory could be evolved towards or integrated within an ecosystemic approach as it allows for the complexity of the various factors which influence the learner. During the study I became interested in exploring the integration of these two models and found that the model as framed by Santostefano (1988) could be adapted towards an ecosystemic framework. As mentioned before, Santostefano's model (1988) of cognition in therapy would focus on the fact that a belief or self-statement such as "I am a failure" may have several meanings, and several different statements may convey a single meaning, and what a person says may be a "tip of the iceberg" (Santostefano, 1985:7)

Santostefano's (1985:10) approach to information processing suggests that the individual is an active organism who creates his/her own knowledge through providing symbols to information, giving meaning and taking action based on the meaning. The learner with Down syndrome seems to have strengths in social relations, which means that the learner will be sensitive from a very early age in the area of imposing symbols on other peoples' reactions, which might have a severe impact on early emotional and cognitive development. This description of the approach for information processing integrates comfortably with an ecosystemic approach where it is stated that the individual constructs his/her own meaning. From an ecosystemic approach it is also stated that the learner and his/her behaviour exists within the context of a "multiple interacting system". The caregiver-infant attachment relationship becomes a template for the relationship between the psychologist and the learner. Mother and infant engage in reciprocal exchanges and the infant decodes the communicative behaviour in others. Consistent responses to the infant's needs are essential and this relationship may be described as an affective communication system. The psychologist attempts to facilitate balance between the learner's needs and the needs of others in the learner's ecosystem. Behaviour is the learner's attempt at getting his/her needs met and is adaptive "*in the moment relative to the child's internal organization, history, and environmental context*". Clinically it implies that the psychologist should seek for the adaptive meaning that specific behaviour has for a learner, although the behaviour appears dysfunctional. The learner's reasons for behaving in a particular way are embedded in his/her history of

interactions and experience instead of some objective discoverable reality. All stakeholders within systems have their own subject-dependent understanding of a learner's behaviour which influences their response to the learner. An uncoordinated "*caregiver-infant dance*"[6] (Keeney & Sprenkle, 1982:15) may result in an inability by the learner to self-regulate due to the learner's experience of a breakdown in mutual regulation. This correlates with the internal working model (IWM) which indicates the intrapsychic representational systems within the ecosystemic perspective (O'Connor & Ammen, 1997:5–11) . During the study an attempt was made to facilitate this reflective process by concrete or metaphoric respresentation of experiences through play. The learners with Down syndrome reacted well to this. I was continuously conscious that the intrapsychic, biological and social systems are interdependent, with the assumption that the biological domain defines the initial constitutional abilities of the learner and that development takes place through interaction of the learner's internal states, with each other and with the environment. The deviation from normal development due to Down syndrome may influence this interaction significantly, but it is suggested that systems beyond a certain level of complexity cannot be known completely. A portion of the ecosystem can merely be selected to develop a working model. This therefore indicates that my therapy and observations in various contexts only reflect a portion of these learners' intrapsychic ecosystem and clearly indicates the limitation of all assumptions made during this study. I personally perceive this continous awareness as an important theme emerging from the study, as the limitations in our diagnosis and observations are clearly underestimated in all the work we do as psychologists. Although we indicate that we understand the complexity of the existence of the individual in the ecosystem, we still continuously reduce the learner's functioning to understandable parts, often to the disadvantage of this specific learner. It is this phenomenon that I continously reflected on during the study and I found it extremely challenging to educate all the individuals involved with the Learners with Down syndrome to undersand this principle.

Santostefano's (1985:10) model also explains cognition as a range of structures from surface verbal structures to deeper nonverbal structures. These structures are associated to be mobile and in the study it was found that these structures could be associated with the internal working model of the learner. The person's adaptive intention influences how cognition shifts within this range. This can also be associated with the ecosystemic model, where the learner is assumed to attempt to get his/her

[6] Discussed in chapter three 3.4.2

needs met and behaviour is viewed to be adaptive. The model of cognitive control assumes that the purposes that cognitive structures serve change throughout development in concert with changes in personality, but the structures remain the same. It is also assumed that the structures and functions of cognition in the first three years of life are critical for future development and adaptation, especially symbolizing/ pretending. The ecosystemic model emphasizes the importance of the interactional relationships during the early years and the psychologist should seek the adaptive meaning of behaviour (O'Connor & Ammen, 1997). Here the ecosystemic approach can be related to the assumptions of the importance of the relations between cognition, on the one hand and effect, fantasy, reality and action on the other – how the meanings given to experiences undergo change and the purpose of these changes for successful psychological development and adaptation skills.

.

During the conference I attended in Madrid, Spain, 1997, one of the outstanding characteristics of the Learners with Down syndromes who had experienced independence was that people had believed in them. In my study the parents' expectations were raised and as this happened, the learners were able to perform at higher levels. For instance, one learner in the study had exhibited various mannerisms in the special school he had attended. One month after being included in a mainstream nursery school these mannerisms had disappeared. This upliftment towards more socially appropriate behaviour was evident in the other learners in the study as well. This indicates that the learner with Down syndrome is able to model the behaviour of others. What are the implications of this theme for the IWM of the learner? The learner observes the behaviour of another individual and presumably assimilates various aspects of that behaviour. The question that arises is which motives, effects and fantasies direct the learner with Down syndrome so that a particular control dominates at that moment? When looking at the performance on the Form Board: the verbalization "I can't" gives a strong notion of the affect and fantasy directing the control and adaptive intention. What normally happens when the learner says "I can't"? An assumption could be made that due to the learner's strong inter-social ability he/she observes the reaction of the educator and this leads to adaptation and change or affirmation of the initial meaning. During this study I focused intently on nonverbal reaction, providing feedback of non-judgement and acceptance to facilitate the adaptive process towards meanings of self-acceptance, and in the process attempted to direct the adaptive nature of the controls. This was strengthened through the Developmental play therapy where the dominant message

conveyed was acceptance of the learner as he/she is and of facilitating the discovery of who he/she is. A professional doing therapy or assessment, observing continuous failure may influence the effect of the learner in a way that inhibits functional adaptation. During the study it often seemed as though many of the learners' strategies used to cope were unconscious. But this observation may be incorrect. At times, conscious attempts to adapt were also observed, such as a learner tearing up his art work so that nobody could see it, or refusing activities because he knew his level of performance was not the same as the other learners, or the conscious statement "Help me!" due to frequent failures experienced. It is uncertain how often the learners with Down syndrome leveled information in the external environment while attending to private thoughts due to anxiety or fear (Santostefano, 1985:17).

I chose to use **Cognitive Control Therapy** due to the relevance of this therapy for learners with Down syndrome, as described by Eloff (1997). From the perspective of Santostefano's model (Santostefano, 1985:18), it is suggested that the cognitive controls are organized to deal with creating balance between the demands of internal and external information. Each has an adaptive purpose. Mechanisms of defence disguise and displace needs and drives, and cognitive controls attempt to maintain a pace of stimulation that serves learning and adaptation. When working within the context of second-order cybernetics and relativity, concepts such as "defence mechanisms" are questioned. Within the context of my study, I therefore had to critically consider my use of Santostefano's (1985) model for the interpretation of my findings. Bruner (Bigge, 1982:232, 240) sees learning as involving three "almost simultaneous processes, (1) acquisition of new information, (2) transformation of knowledge, and (3) check of the pertinence and adequacy of knowledge" (Bigge, 1982:232). To deepen this dialogue a thorough exploration of information processing would be essential, but such an investigation falls beyond the boundaries of my study. I cautiously used Santostefano's (1985) model from a different perspective to open possibilities for further exploration and in this discourse I only share my subjective experiences. My experiences could however open up the possibility of using the model of Santostefano (1985) from an ecosystemic perspective, but as mentioned, I had to observe my own interpretations critically as one easily falls into a reductionism paradigm of diagnosing and analysing. I merely tried to focus on the individual learner's process of cognitive control from an ecosystemic perspective and felt comfortable with the integration of the two models, as I feel that they could

actually complement each other (Brennan, 1988:25; Santostefano, 1985:18).

I noticed that it seemed important to consider the implications of cognitive controls of the subsystems, such as parents and siblings. Where the siblings of the learners with Down syndrome had been evaluated, dysfunctional cognitive controls profiles were observed. The adaptations the sibling had to make in reaction to the parent's reaction to the learner with Down syndrome could have contributed to this profile. For instance a mother's depression could have contributed to a change in the pace and complexity of stimulation provided and this could have influenced the behaviour of the father, grandparents and others. The cognitive controls in all the family members may therefore regress to earlier levels of organization or new levels may evolve. Personality dynamics need to be negotiated at the time the environmental change occurs. From an ecosystemic perspective this would indicate the internal working model of the relationship as well as the internal model of the self (Santostefano, 1985:19, 20). My observations indicated that we need to study the metaphors of the Learners with Down syndrome in more depth as they do not have to construe abnormal development. For instance, Werner's metaphor for horse riding (the specific meanings he attaches to this process) or the meaning Janie attaches to constantly following the animals or Angelique's aggression towards dolls and Bernard's pretence to be "Lion King" need to be observed. When looking at developmental delays with the learner with Down syndrome, it may be that they represent events in the action mode due to their level of maturation. With development, the action mode is subordinated by and integrated within the fantasy mode. Social manipulation as observed in the learners during the study may constitute an alternative social behaviour used towards the goal of avoiding tasks which could indicate a shifting from concrete to abstract, where the concrete behaviour may initially be to run away or avoid eye contact. The learners in this study would, for instance, also be the clowns in the classroom or tumble with another learner with Down syndrome.

When related to the clinical diagnosis of Down syndrome, learners with Down syndrome may predominantly exhibit dysfunctional cognitive control. The evaluation profiles for the Cognitive control battery of the learners in this study seemed to vary mainly between an outer and an inner orientation. With a rigid outer orientation the accessibility of metaphors to discover new information and the contribution of

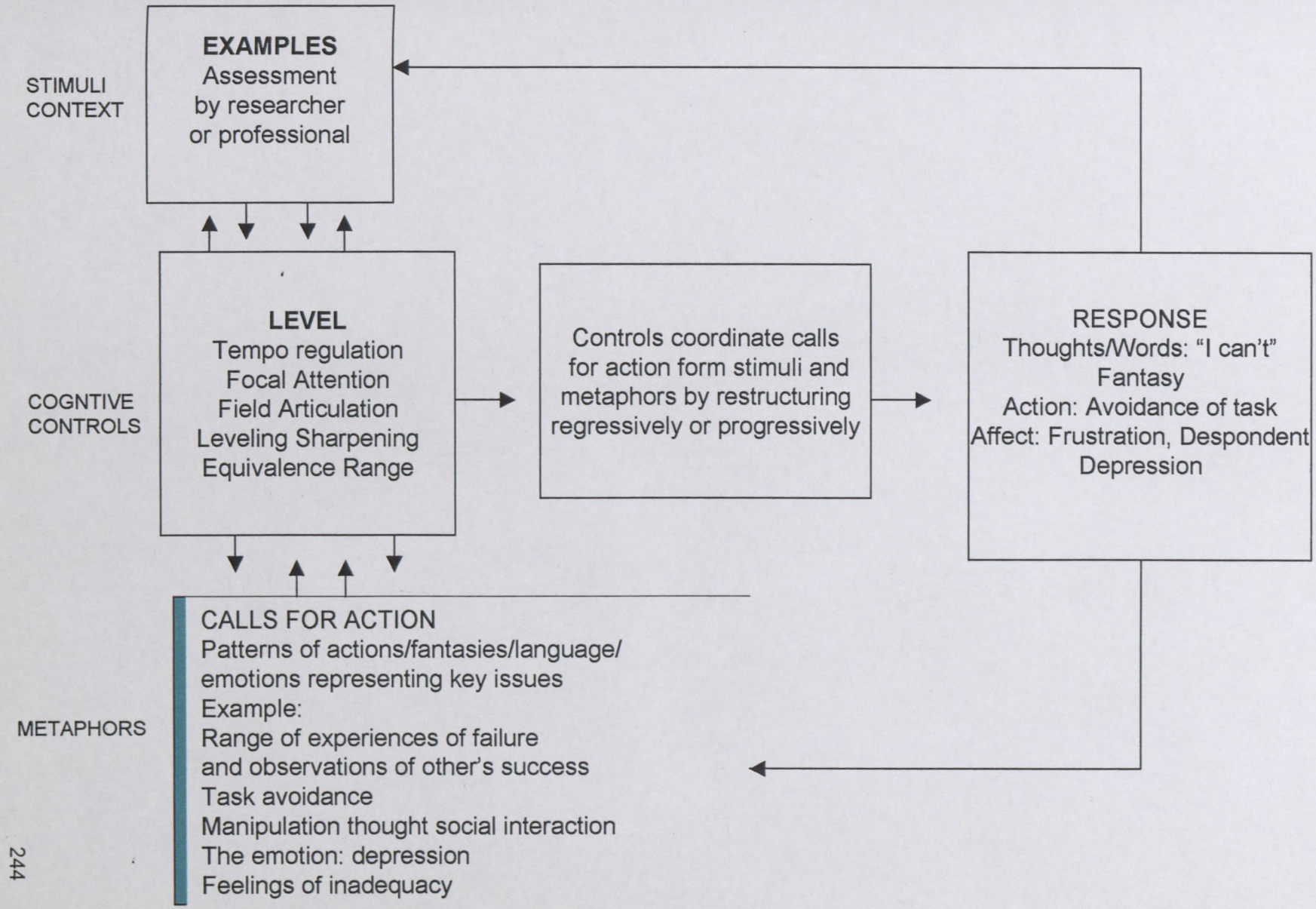
metaphors in serving an adaptation are limited as the controls are excessively occupied with external concrete stimuli and metaphors are then ignored. Some indication of dysfunctional cognitive controls was also observed through behaviour such as avoidance strategies, resistance and learned helplessness. Developmental play therapy was integrated at this point to facilitate the process of capturing the inner metaphor from which the child escapes (often a cogniton of "I am different", or "not good enough", or "something is wrong with me") and provide a nurturing context for the self, the "I" to develop. I postulated that Developmental play therapy could facilitate the process of restructuring dysfunctional metaphors with the benefit of stage adequate cognitive functioning (Santostefano, 1985:205). By integrating Developmental play therapy at these stages, I negotiated reciprocity, focalising and self-assertion. I often imitated the learner's behaviour and focused behaviourally on the learner's needs and ensured availability. I did not respond to anger or avoidance (teasing/hiding), but stepped past them, displaying interest. The way in which I conveyed pleasure about being with the learners and facilitated the process gradually allowed me to demand more from the learners. Once the learners were comfortable with my availability, I often invited the learners to challenge me. I generally attempted to follow the guidelines for Cognitive control therapy as provided by Santostefano (1985:78). I allowed the learners to take the initiative, experience self-assertiveness and participate in the activities. The learners also received the opportunity to re-enter a reciprocal relationship through alternating between passive and active positions. I would then gradually modify the activity to move towards features of the instructions which the learners had abandoned. The complexity of the tasks was reduced when the learners returned to the task and also in an effort to create a better fit to the learner's cognition. I attempted not to make interpretations, except for the sake of resolving resistance and to facilitate a more functional process in approaching tasks within a context of errorless learning. The resistant behaviour was therefore integrated within the response process of the cognitive task by integrating Developmental play therapy with CCT and this did not require surrender of self-assertion from the learners. These activities required patience, flexibility and creativity from me as well as an acceptance of alternative definitions of therapeutic outcomes in the continous process of joining each learner's microsystem. I felt comfortable with adopting a non-authoritarian role at times as it was extremely effective during the process of Developmental play therapy. It was my perception too that the play therapy integrated the conflict of the learner with an element of the cognitive task. It was challenging to constantly determine if the activities in which the

learners engaged during therapy were resistance or a process of dealing with emotional issues. I am not sure if one could truely make this distinction as these issues are integrated. I also needed to be cautious not to feel uncomfortable with Cognitive control therapy due to the repetitive nature thereof, or to irritate the learners thereby. (Santostefano, 1985:80–81). The type of resistance exhibited by the learners in the study included hiding, crawling, attempting to go out of the room, refusing tasks and teasing me by attempting to pushing me over during activities on the floor. Altough I often assumed a non-authoritarian attitude, the therapy was constantly directed by me. The learners assimilated my behaviour with a realisation that I did not react similarly to other caretakers and educators.

I observed that all the learners had difficulties with body-ego tempo regulation which could therefore at times create difficulties towards taking action. With all of the learners there were indications (at varying levels) that they could articulate sections in a field, compare present objects with previous images, and categorise objects' terms of similarity. Yet the evaluation results indicated dysfunctional cognitive performance, indicating the importance of qualitative interpretations. The learners all seemed to be able to perceive psychological state in other people and at varying levels they were all able to infer the reasons for material to be in some particular arrangement. They could all engage in various roles with the experience of varying fantasies and emotions.

A complex relationship between cognition and affect for the learner with Down syndrome is indicated in Figure 23 (see previous page). I came to the conclusion that we need to analyse very clearly the expectations set for developmental milestones. As educators, we are constantly formulating particular outcomes for each individual learner during the study. Who are we actually speaking for when we formulate particular educational outcomes? I constantly confronted myself with questions such as "Are the outcomes truly relevant for every individual learner with Down syndrome and for Down syndrome as a generalised concept?". I experienced the reality of how easily we generalised outcomes for all learners and how difficult educators found it to individualise in some contexts where they had been teaching within a normative, traditional perspective for many years. In general it was much easier for teachers in the informal setting of the pre-school than in the primary schools.

FIGURE 24: A POSTULATED MODEL OF COGNITIVE CONTROLS, METAPHORS, AND CONTEXT IN PERSONALITY FUNCTIONING AS OBSERVED DURING THIS STUDY FOR THE LEARNERS WITH DOWN SYNDROME



Adapted from Santostefano(1985:28)

If a learner is unable to complete a test we may not say that the learner has dysfunctional abilities in the specific domains, for instance, Janie's inability to follow the instruction of CCB. This continuously brought up the issue of tapping the learner's potential and the limitations of current psychological tests. Although the CCB allows for the learner's way of functioning, the integration of Developmental play therapy and Cognitive control therapy (body-ego-tempo regulation) was successful as it complements the focus on the body during this phase of Cognitive control therapy, and therefore strengthens the Cognitive control therapy. All the learners reacted positively to Developmental play therapy. It seemed to be an effective way to motivate the learners to engage in therapy and re-engage when attention was lost. It also enhanced the establishment of rapport and maintaining a close therapeutic relationship (including security and continuance for the duration of therapy). Actions such as becoming comfortable with a formal structure were also included in the therapeutic outcomes as well as reinforcing language development. Close collaboration with other therapists promoted therapy for all the therapists in their specialisation areas.

Cognitive control therapy facilitated improvement, but would have been more effective if at least two sessions of therapy could have been arranged every week. The ideal would have been if the therapy were integrated in the school system. Attempts were made, but practical factors such as the workload of teachers and the sensitive nature of inclusion at that stage of the study prevented the actual implementation. I could merely make suggestions, not force or prescribe any measure, although the educators were, in general, positive to being trained. The flexibility and creativity required of me, such as doing Cognitive control therapy on horseback, re-emphasised the importance of a reflective, creative approach to learners with special educational needs and an attitude of a lifelong learner as therapist, because our skills become more effective and we see the limitations in, or theory through learners with special educational needs.

5.2.5 LEARNING SUPPORT

I provided guidelines in learning support to educators, parents and therapists. Together with other professionals, I explored various strategies for individual learners. The knowledge acquired with individual learners through problems solving was shared with other parents and professionals.

It was observed that all the learners with Down syndromes participating in the study responded well to literacy training with varying levels of progress. The general guidelines as provided in the literature for learners with Down syndrome were applicable.

All the learners in the study also had difficulties with numeracy. I played a role in introducing various methods of mathematical support. For instance, we explored the Kumon learning programme as this was included in one of the Montessori schools where one of the learners had been placed. It was found that a collaborative approach in learning support within a trans-disciplinary approach was applicable, as this strengthened learning. As seen in the literature, it was found that the learners participating in this study had difficulty with short-term memory and frequent repetition was important. Teachers often discussed the fact that a learner knew information on one day and could not recall it the next. Teachers were encouraged to repeat instructions and activities, but time constraints in some instances made it difficult to provide opportunities for repetition. Teachers within an outcomes-based educational system had less difficulty finding the time and logistics to repeat instructions or information frequently. I played an intensive role in consultation and support for the educators. The theme continuously emerged that it was not so much expertise as the general feeling of having a support system that the educators and other professionals appreciated. The continuous outcome therefore emerging was that the sharing of knowledge, experience and expertise within a collaborative team was essential and extremely valuable. I attempted to move away from the notion of being an expert. The collaborative relationship that was established provided mutual trust and a relationship of sharing in a comfortable, respectful way. The Down Syndrome Association reinforced this perception.

The detailed process of recording on the IEP was however not effective. It was time consuming and difficult to circulate the programme between all the parties involved with the child.

I initially requested the following from teachers concerning the IEP:

- Which field in the IEP they were prepared to evaluate.
- Which field they were prepared to reinforce and support in the school setting, or any other contributions they were prepared to make in the various fields.

- They were requested to share there planning and themes with me.
- Confidentiality of the learners' potential was requested and they were asked not to compare the various learners with Down syndrome with each other.
- The teachers each received a list with all the telephone numbers of the educators involved in the project, to encourage them to network with and support each other.

The use of the IEPs was generally not effective. Although all the teachers were willing to participate, time constraints made them less effective and I realised the need to do further research on the practicalities of individualised educational programmes as they could also lead to the exclusion of learners. The educators preferred to make their own adaptations in the classroom, which also caused less exclusion of the learners, and the parents continued informal life skills training. The initial IEPs were based on the outcomes that parents and educators envisioned for the learners and I had the impression that many of the outcomes were reached although they were not precisely documented by parents and teachers.

5.2.6 SOCIO-EMOTIONAL DEVELOPMENT AND INTERNAL WORKING MODEL OF THE LEARNER WITH DOWN SYNDROME

From my observations the impression was created that the learners' general level of creativity and relaxation, the use of their own initiative, their relationship with me, their level of attending, and ability towards self expression and communication had improved over the period of the study. The effect of low muscle tone was often observed during therapy sessions and classroom activities as the learners often showed a need to lie down.

The impression was created that the emotional development of the learners participating in the study needed to receive more attention than anticipated. Disciplinary and other support strategies needed to be adapted to the need of every individual learner and the educators often needed skills to deal with manipulation and task avoidance. Judgement was made on ethical considerations when evaluations were done. At times, research goals were sacrificed for the sake of the learners' well being and decisions were made against evaluations when the assumption was made that it would not have been in the best interest of the learners at that stage.

The general manageability of the learners in therapeutic and educational settings

improved as the learners and I became more comfortable with each other and they developed socio-emotionally. I adapted my style to each individual learner's needs. I observed an improvement in the learners' general emotional well-being through behaviour such as more frequent laughing during therapy sessions. Development could also be observed in the learners' drawings.

From an ecosystemic perspective the learners' needs had to be balanced continuously with the needs of their culture and mesosystem. As discussed earlier, developmental play therapy and Cognitive control therapy was integrated once a week for each learner. Where learners had to be brought from other regions outside of Pretoria, sessions were sometimes missed for practical reasons. The therapeutic relationship with the learners became well established, which facilitated all further evaluations and decreased the level of avoidance behaviour that occurred during therapy and evaluation. This indicated that the internal working model of the learner with Down syndrome could contribute to the level of collaboration and performance during assessment and support and not just the learner's intellectual ability or learning potential. My own relationship with the learners developed positively with the result that when I sometimes visited the school to see the teacher, the learner would run to me eagerly, thinking that I was there to give him/her therapy. I was continuously confronted with their learning potential, which manifested during qualitative observations. This strengthened the assumption that the potential of learners with Down syndrome are misinterpreted, indicating that there are many perceptions about the learner with Down syndrome. My own constructions certainly changed from not knowing what to expect, to a humbling realisation that in many ways, psychological theory had failed learners with Down syndrome, especially concerning psychological assessment and support. The reflective response evoked in me was to learn more about the individual learner with Down syndrome, as this informed assessment and support strategies created opportunities for the individual learner to reach his/her rightful potential.

5.2.7 THE SCHOOL ROUTINE

In general the inclusion of the learners in the school routine progressed well. The attitude of the teacher played an important role in this process. There were times where I had to fulfil an advocacy role for the learners due to the individual learner's

vulnerability and exposure to systems that were still orientated towards a medical model. Behavioural problems such as self-stimulation or running out of the classroom needed to be addressed at times.

5.2.8 LIFE SKILLS

During the study it became evident that the learners' general life skills were improving. I monitored their progress and the parents were all willing to work towards more independence at home. The different schools provided varying levels of life skills training, depending on the educational style adopted at each school. Schools where an outcomes-based education programme was followed provided greater emphasis on life skills training. I was often consulted on possible strategies to improve life skill orientation for the learner with Down syndrome. I would then share the knowledge that was available to me, consult, reflect or do further research on issues where there were challenges. I facilitated a process in collaboration with other educators and the parents, through which visual sequence pictures were made of activities such as the bathroom routine and other life skills, so as to make the skills training more visual for the learners. The parents were continuously encouraged to promote independence and life skills through the use of the individualised educational programme (IEP) as discussed earlier. Parents could follow the programme because they felt comfortable that I did not wish to place too much pressure on the parents or set unreasonable expectations. The idea was to construct a reality of informal life skills training at home where the activities were integrated into the daily routine. The parents were happy with this process and included life skills where possible

The various roles I facilitated for the learner with Down syndrome are indicated in the display in Figure 26. These roles included the role of administrator, collaborative consultant, diagnostician, evaluator, facilitator, learner supporter (including the role of material developer), manager, mediator, mental health facilitator (including a role in a role in clinical psychopharmacology), psychotherapist, ethical and reflective practitioner. These roles had implications for the learner's internal working model of him/herself, his/her internal working model for relationships and the internal working models of the parents, educators and myself where the family of origin also plays a role.

5.3 MESOSYSTEM

At times, the parents wanted support in dealing with issues such as discipline, and workshops were provided to facilitate this process as well as to facilitate solutions towards plans of future independence for the learner with Down syndrome.

Towards support within the mesosystem, my role proceeded through phases:

Phase 1 : Establishing a relationship of trust with the families (joining the family system).

Phase 2 : Assessment and support.

Phase 3 : A phase where the boundaries of the educational psychologist became apparent and I needed to share these boundaries where relevant.

Phase 4 : Continuation of assessment and support.

Phase 5 : Termination of support and empowerment of the families.

The following limits were observed in my role as an educational psychologist within this study: Psychological support from me to the families formed part of the research agreement with the parents as participants in the project. As the agreement was initiated by the research project, this was different from a context where clients would consult me as a psychologist at my practice. As a psychologist, there are specific ethical obligations such as the "*obligation to treat if there is a prior contract that services will be rendered*" (Allan, 1996:1). I also had to fulfil the role of 'bonus pater familias' within the context of my legal role. Challenges arose when the boundaries of the initial agreement needed to be set, and I had to reflect on where my responsibility as a psychologist ended and where the parents could be expected to take up their responsibility. Generally within the context of a private practice, this issue would not have been a problem, but in the context of a research project it becomes more complex. I truly attempted to prevent professional negligence and according to Allan (1996:8), negligence is indicated when psychologists "*fail to act where the circumstances are such that it could reasonably be expected of them to act*". There were times when the families could not find time to follow up home activities or therapy sessions were frequently cancelled. I had to decide at what level to act assertively for the benefit of the study. Furthermore, the individual's right to autonomy and privacy needed to be respected and could not be risked because of the project. I

often observed indications of dysfunctional interaction within families and indicated that support was available towards solutions or change. If the individuals felt that they were not ready for change or support, I had to respect this within the context of a constructivist approach, indicating that my construction of the reality was different from the construction of the client. Family members also often differed in their construction of the reality and I needed to be cautious in suggesting family or individual support. It was my perception that the trauma of having a child with a disability such as Down syndrome is generally underestimated and most of the families had developed coping strategies over the years, including defence mechanisms, to create a manageable interactional system within the family and to accommodate each other's individual internal working models in various ways. At times the perception was created that dissociation and repression within individuals could contribute to health problems in some of the parents or could manifest as problems with the sibling. The sibling could then become the "identified person". I had to deal with these issues cautiously and had to remind myself not to think linearly, but to respect the constructions of the individual's reality and to accept the parent's definitions of a balanced family system.

Furthermore, within the context that dual roles are not recommended for psychologists, I often had to reflect on my dual role as psychologist and researcher, as this created difficulties during the support process. I firstly took ethical precautions through the initial agreement with the parents. Secondly, I awarded the responsibility for all decisions to the parents or with the consent of the parents. Thirdly, the urgency of challenges that arose would also influence my actions and decisions. At times some of the parents did not understand the limitations of my role as a psychologist, which created challenges, but fortunately these were single incidents and could be facilitated effectively. Where parents were divorced, consent for support was obtained from both parents. I also had to make decisions about my role as helper versus clinical observer, my limitations on confidentiality, the client's responsibility towards decision-making, limitations in time and space for consultation, gifts and other services, self-disclosure and physical contact. As families became more relaxed and many personal issues were shared with me, boundaries were shifted in a comfortable way.

The parents requested a workshop for siblings, but the time constraints eventually did not leave room for this workshop.

From the interviews with parents the following main issues were important:

- The way the first news of having a baby with Down syndrome was shared and the role of the medical profession during this phase often traumatised the family.
- Frustration with suggestions and guidelines from professionals such as "routine being good for learners" often occurred as some families found it difficult to maintain a routine for various reasons.
- Comments from other people in the subsystem about the discipline of the learner caused difficulties for the families. For instance grandparents would comment that a particular learner was not disciplined by the parents, because he often woke up at night. The parents however felt that the learner's specific needs contributed to irregular sleeping patterns.
- Parents often suffered from sleep disturbance, due to the sleep disturbances of some of the learners in the study.
- Parents felt frustrated if the learner did not perform in a test situation as he/she usually performed at school or at home.
- Practical problems were experienced with the frequent travelling to my practice, especially for the parents living geographically further away.
- Occupational choices were often made in consideration of the learner's interest of being closer to therapeutic support.
- The effect of the baby with Down syndrome being the first or second born had different implications for further pregnancy and pre-natal testing. For instance where the baby was the first born, the parents went for intensive pre-natal testing with a second pregnancy and some parents felt that they did not want other children.
- There were emotional and practical implications due to the frequent illnesses of individual learners with Down syndrome.
- Intensive home programmes had emotional implications for family life, such as the practical implementation and survival of the family, the influence on the marriage, and the challenges of partners to create time for each other.
- At times, the parents felt frustration with therapists about issues such as varying support provided, losing patience with learners, and setting standards too high because the therapists were not that familiar with Down syndrome. One speech therapist for instance also expressed the opinion that the therapy might be too late, which created uncomfortable feelings in the parents.

- Towards the end of the study, some of the girls were close to puberty and concerns about sex training came to the fore. There are many sensitive issues regarding this and the reality becomes more challenging with a young girl who approaches strangers with ease and without inhibitions.
- It was also observed that having a child with Down syndrome created many dynamics in various subsystems, such as changes in family friends and some families becoming isolated.
- The parents sometimes felt that they could not give a second or older child the attention they would have liked to give as the parents, as they were too busy with the learner with Down syndrome.
- Parents felt tension about how much pressure to put on the learner concerning homework, with regard to reaching the same level as other learners. They also experienced anxiety that the learner may not be allowed to continue in the class or school.
- Parents had concerns that their child may be disobedient at school or exhibit behavioural problems.

My general perception was that I had good contact with all the parents and that a relationship of trust had been established during the period of the study. I found that issues such as epilepsy, medication, and the co-morbidity between Down syndrome and Autistic spectrum disorder needed further research, as there are many unanswered questions, which created emotional challenges for parents. The parents were also anxious about school placement and there were many times when they doubted their placement choices. Support was needed during these times. I felt that it was important to facilitate and monitor the parents' emotional state. Neglect of the parents' well being could contribute to dysfunctional intra- and interpersonal dynamics many years after the birth of the learner with Down syndrome. I realised continuously that the meaning parents had given to their situation, and their experiences and trauma always needed to be respected. I was very conscious of the issue of value-judgements, the severity of the implications thereof and the way these issues are often underestimated by professionals. In respect for confidentiality of parents' and siblings personal needs detailed information will not be shared in the research report. But for the purpose of the report it is important to be conscious of the above mentioned issues.

Parent workshops:

Workshop 1: A holistic approach to the development of your child.

The first workshop provided guidelines on the physical, psychic (affective and cognitive), conative, social dimensions, and normative and socio-emotional aspects of development. Issues such as "times of existence", reading and life skills were also addressed. From the parent workshops, a network was established between the parents. As mentioned, the parents made visual material indicating sequences of actions for life skills training and language development. Copies were made for all the parents, but the results were varying as some parents became caught up in busy routines and others used it extensively.

Afterwards, the parents were requested to evaluate the workshop by means of the questionnaire on the following page.

Workshop 2 (27 July 1996):

The programme for the second workshop included the following themes:

Healthy family dynamics (R. Newmark)

Research on L-Carnitine (Prof. N. Dippenaar)

Entrepreneurship (Mr. Maré)

Research and guidelines on L-carnitine were shared, as the research revealed improvement in the muscle tone of learners with Down syndrome. From the workshop on entrepreneurship, guidelines were provided to parents to initiate entrepreneurial education. The parents initiated collaboration between each other to start various businesses, which would later be run by the learners with Down syndrome and they planned to create a joint trust for these learners.

At the end of the year a closing function was held, during which the teachers were thanked and the learners each received a certificate as a reward for the completion of their year before formal schooling.

QUESTIONNAIRE COMPLETED BY PARENTS DURING THIS WORKSHOP (SUMMARY OF ALL THE COMMENTS, IN PARENTS' OWN WORDS, BUT TRANSLATED INTO ENGLISH):

Question	Answer
Is the project progressing according to your expectations?	Yes Yes, definitely Yes Yes, thank you Yes, Cindy shows a big improvement Yes, Hannes' general improvement is fantastic Above expectations Yes
Any areas where you need more support?	Yes, will discuss during personal sessions of parental guidance No No, Rona you are a pillar of support ("steunpilaar") Not at this stage Not at this stage Not at this stage
Are you expected to provide too much input?	No No No No No No No Almost, but not too much
Any themes that you would like more information on?	Kumon maths Second-language development Very good and informative Will let you know
Your opinion on the workshop of 27 April 1996?	Very interesting and informative Wonderful, learnt a lot Thank you, we always learn Very good, we appreciate it Good background and information Very good, we learnt a lot Very good, will address specifics later
Any other comments?	None Thank you very much None Thank you None

QUESTIONNAIRE TAKEN AT THE CLOSING FUNCTION (END 1996) FOR THE PREPARATION OF THE 1997 PROGRAMME:

Question	Answer
Is the project fulfilling your expectations?	Yes, opportunities are created to the advantage of our child Yes Yes, as parents we feel more equipped for the task that lies ahead Yes Yes Yes, his speech and relationship with other children is very good and he has much more confidence. Yes, absolutely Yes, child's progress is very good. Good support.
What would you like to change concerning the support from the researcher?	None Nothing None Excellent program (need speech therapy) 100%, everything was good
Would you like to receive parental guidance during 1997?	Yes Yes No, will ask for support when needed No, will call if we need support Yes Yes Yes
If the answer to above is yes, how often? (every 3/6 weeks or every 3 months)	Yes, every 3 weeks Yes, 6-weekly 3-monthly Yes, 6-weekly Every 2–3 months 6-weekly
Would you like workshops to be presented during 1997?	Yes, a list will be provided Yes, maximum 3 No Yes, one (and support for siblings, without parents) Sibling workshop Computer training (support for the child) Yes Yes
Would you like your child to receive weekly therapy during 1997? Would you be prepared to bring him/her to the researcher's practice if the school finds it difficult to provide a room for therapy?	Yes Yes No (parents moved too far away) Yes Yes Yes (once a month) – parents live far from practice Yes No (distance too far)
Will your child receive speech and/or occupational therapy during 1997? Please specify and indicate if the therapy will be provided privately or at the school.	Yes (same as during 1996) Yes (E. Naude & K. Mohr) If possible, yes Yes (L. van Wyk, A. de Wet) Both at school Private therapy Yes (both at school and privately) Still need to find a therapist in the area Yes (school and privately) x 2

Collaboration of parents:

The general collaboration of the parents was excellent and the parents were prepared to get involved in therapeutic support at home to compliment my therapeutic support. At certain stages, the parents were also involved in some of my therapy sessions with individual learners, to provide guidance for the home programme. The importance of transfer and reinforcement of cognitive control therapy and other support programmes was again confirmed, with the caution that parents needed to remain parents and not become therapists at home.

School placement:

I supported the parents in selecting schools and negotiating with school boards educators and principals. This experience was strenuous to varying degrees for most parents. The schools varied in their reactions, with different effects on the parents. Some schools were prepared to place the learners immediately, others needed mediation and some refused the learners with Down syndrome. The parents could lodge a complaint, but they generally did not feel comfortable placing a child in a school where he/she was not welcome. At one specific school the principal was positive, but wanted us to be presented in the learner's context to the school board. During the discussion with the school board, the principal twice stated that the learner with Down syndrome was uneducable. A letter was addressed to the Director of Support Services, Mr Edcent Williams, to request support in dealing with the matter. The parents were, however, no longer interested in placing their child in a school where such an attitude was prevalent. Another school was reported because parents blockaded the gate, stating that a 'mongoloid' would not attend school with their children. During these incidents, the parents needed intensive emotional support and motivation, as they often became despondent and feared that their child would be emotionally harmed during the process of inclusion. Negotiations with the Department of Education were time-consuming and sometimes complicated. In one school, the school psychologist was prepared to place the learner in the special class on a trial basis, and intellectual assessments were required. The parents and I accepted the trial period humbly, although the feeling was that the learner's rights were not fully supported. At that stage however, there were no other options. Fortunately the process proceeded positively and the learner was happy and accepted. At the end of the year she was also awarded a prize, together with all the other learners.

Contrary to all expectations about placing a learner with Down syndrome in a school where she would be educated in her second language, one of the learners was placed in an English school. Carise adjusted with ease and mastered the second language (her Afrikaans language base was well established). Another issue that could have facilitated the process of learning the second language was the fact that Carise was placed in a Montessori school, which operated in an outcomes-based way.

There were times when I had to facilitate crisis management in collaboration with the parents, as in one incident where a learner had been placed in a private school. The learner was removed from the school because the school's attitude was generally unacceptable and there were safety risks for the learner due to an opening in a fence and traffic near by.

I truly experienced the reality of second-order cybernetics, indicating that objective observation was not possible. In joining the systems and providing a holding environment for the families, both joy and sorrow was shared. This journey became part of my reality and enabled me to respect the perspectives of all the stakeholders. This process required dedication and an investment of unlimited time and energy, but it was extremely rewarding to me as a professional. The parents often shared feelings of great appreciation for the holding relationship, which indicates that a support system created by the psychologist at various levels of the ecosystem could contribute to the success of inclusion of learners with Down syndrome.

5.4 OTHER ROLES FULFILLED BY THE RESEARCHER AT OTHER LEVELS OF THE ECOSYSTEM (exo- and metasystem)

5.4.1 INTERVIEWS AND WORKSHOPS: EDUCATORS AND OTHER PROFESSIONALS

I perceived the relationship established with all educators during the pre-school and Grade 1 year to be positive. All the teachers were prepared to collaborate positively. I focused on joining the teacher-school system in a supportive, non-blameful way, but as a collaborative consultant focusing on the needs of the teacher. When the

teachers felt that they were not judged, they were comfortable with sharing concerns, problems and successes as well as working towards constructing creative solutions. This process was the most successful in schools with an outcomes-based approach. Traditional schools sometimes found it more difficult to include the learner in all activities, but the general attitude of the schools was positive towards full inclusion. Due to the pioneering nature of the project I accepted the school's attempts towards inclusion in the way they could manage it and attempted to facilitate transformation and an attitude of focusing on systemic issues as far as possible, rather than on problems within the learner.

Teachers continuously made positive comments about the learner's progress. During Grade 1 there were generally more concerns about the learner's progress and the possible evaluations of the teacher than during the pre-school year. The teachers collaborated well in compiling the evaluation reports and at times they were concerned that the learners with Down syndrome perceived and realised that he/she was different, and they found this challenging to facilitate. During these times I provided support for the teachers to support the learner, and I also attempted to facilitate the learners with Down syndrome's needs during therapy. As the learners' courage to take risks increased they sometimes engaged in inappropriate behaviour such as teasing or pulling nametags off the tables. The teachers were skilful in dealing with these challenges and the assumption that a generally well-skilled teacher is able to support and educate any learner proved to be true during this study.

An attempt was made to organise several other workshops for the teachers but attendance at the workshops sometimes seemed to be difficult due to the teachers' heavy workloads. Pre-school teachers were more likely to find the time to join workshops.

Workshop 1: 1996

The following themes were included in the workshop:

The focus on total education ("totaliteitsonderwys")
International and national trends in inclusive education
Inclusive education: some practical implications
Visual therapy
Workshop: What was the most difficult up to now and what was my solution?

Educators were provided with information as well as an opportunity to collaborate and network. Files were prepared for each teacher. Various lecturers and professionals made presentations. During this workshop the pre-school educators were trained. Figure 31 includes a questionnaire and the comments of the teachers during the first workshop.

Workshop 2: February 1997

The following themes were addressed in this workshop:

The implications of current policies in the South African Government

National Qualifications Framework (Outcomes-based education)

Inclusion and Outcomes-based education

The educational needs of the learner with Down syndrome (cooperative learning)

Individual educational program

Mediation

Practical ideas for speech development

Practical developmental needs

The speakers were: Marie Schoeman (Director DSSA, Prof P. Kachelhoffer (Departmental Head, University of Pretoria), Mrs Annette Burden (Unisa), Dr A. Kachelhoffer (University of Pretoria), the researcher, Mrs H. van Niekerk (educational psychologist), Mrs L. van Wyk (speech therapist), Mrs K. Mohr (occupational therapist). Each teacher received a portfolio with the theme "The educator with special educational needs" with information and copies of the lectures.

There was a strong focus on developing partnerships.

Question	1 Afrikaans Traditional Boy	2 Afrikaans/ English Montesson Girl	3 Afrikaans Traditional Girl	4 Afrikaans Traditional Girl	5 Afrikaans Traditional Girl	5 English Montesson Girl	6 Afrikaans Hard of Hearing Boy	7 Afrikaans Playgroup Boy	8 Afrikaans Traditional Boy	9 Afrikaans Traditional Girl	10 Afrikaans Traditional Boy
1. How do you experience the placement of a DS child in your class?	- very positive - big challenge - privilege	- a learning experience for all	- no problem	- positive - easy child	- helped to have an assistant - overall good	- new experience - very satisfying	- positive - the class is not big	- enriching experience	- very positive - big challenge	- very ,very positive - what a privilege	- wonderful
2. Until now, what seems to be the biggest problem?	- not aware of any	- often irresponsible - disturb circles	- no participation with group-activities	- attention deficit	- to decide on the best guidance at a given moment - socialization-cognitive	- group activities - attention	- short attention	- to do assignment independently	- wants to play outside - understands now that he must ask first	- too little infor-mation on Down's Syndrome	- no problems really, except language skills
3. Some of the most enriching moments of the year	- when he achieved something difficult - when he started on his own to do creative work	- when she did her part in the concert in front of hundreds of parents	- too many! - loveable - her first own piece of creative work	- Millions! - just to have her in the class - positive influence on other children	- development of the ability to work and respond in a group - joy of realizing she can work in a group	- the love she is sharing - her perseverance to *try*	- his affection and the fact that he is progressing	- when he is leading in prayer - a lot of precious moments, specially when he achieved something	- there are many - the day he slid down the fireman's pole	- the beautiful way she is developing - doing activities on her own	- he is so perceptive for everything beautiful
4. How do the other children accept him/her?	- very good - they were disturbed when he was ill	- very positive - they learn a lot through this experience	- very good - at times she is alone	- children love her - ask when she is ill	- no problem - children understand her problem e.g. muscle tone	- very good - helpful and patient	- no problems	- very positive - they know he is different, protect him.	- no problems - they play with him	- very positive - protective	- very good
5. Is the DS child socializing adequately?	- has a special girl friend - plays alone at times - likes to chase the girls	- yes,but her poor communication- skills tend to be a hindress	- play with a couple of children - prefer younger children	- has two best playmates - shows the new children around - plays alone sometimes	- acquired skills to play in group - previous school: two best friends	- new school, associates with one child - asks about the other children	- yes	- yes, is very friendly - partake in group play	- during inside play, very good - outside: at times alone	- yes	- absolutely
6. Which activities does she/he find difficult?	- creative activity - some gross motor skills	- language and maths - gross motor skills	- group activities	- fine motor skills - language	- cutting (fine motor skills) - lacked initial confidence for group play	- fine motor skills - movement activities	- maths - writing	- long concentration - execution of specific assignment	- attention for longer sessions	- creative activities	- fine skills, cut with scissors - skipping
7. Explain any progress or regress in the child	Progress - speech - social - creative activities	Progress - language - drawings - general behaviour - puzzles	Progress - colour and form - drawings - spacial orientation	Progress - all physical - colour	Progress - a lot in totality Regression - due to clashing of medication	Progress - complete assignments - less stubborn - co-operation	Progress - started reading - almost knows the days of the week	Progress - language - social - independence	Progress - to wait his turn - confidence	Progress - social skills	Progress - is under-standing assignments more
8. What are the attitudes of the other parents regarding the DS child in the school?	- no problems	- positive some feel pity for her	- no problems	- they love her	- initially uncertain - mother concerned that her child will only socialize with DS child	- no problems	- no problems	- accepted him - some are worried about further schooling	- all are interested and ask about his progress - positive	- very positive - friendly toward her	- they see it as a good opportunity for this child
9. Do you think that the other children were harmed by having a LSEN in your class	- no, not at all	- no, it is a learning situation - it is positive for them all	- not at all, they benefit by learning that all children are not the same	- definitely not	- no, never disrupted class - other children benefited - two have siblings with handicaps, saw it is okay to be handicapped.	- no, every child works at his own level at own pace	- no, because all these children have one or other special need	- not at all - he is part of the group	- sometimes when he can't focus his attention	- no, not with 25 in the class	- not at all, they gained from the experience
10. What adaptations did you have to make either in the daily routine or curriculum?	- none	- none - sometimes we give her an altered assignment - had to check that she didn't disturb the others	- group-time - try to have time with her alone	- not really - sometimes we give her something special to do	- nothing really - took into account her lower muscle tone	- no, explanations however, must be given on a one to one basis.	- more individual time	- more one to one teaching is necessary	- nothing significant	- no, differentiate due preparing the lesson	- none, we see him as part of the group
11. What is your opinion regarding inclusive education?	- wonderful - I am a big supporter of the idea	- it is wonderful stimulation for the child, is however demanding.	- very good for both parties. - one must be firm	- fantastic - it is working well for this child - will take more LSEN in.	- can work on preschool work - contact with other teachers is necessary - role of the educational psychologist is important	A milieu with free activities may be appropriate since they do need individual attention.	- under certain conditions it may work.	- the teacher plays an important role. - bigger classes may be a problem.	- there are more advantages than disadvantages.	- positive, teachers however need training	- very positive, since it benefits every child

QUESTIONNAIRE FOR PRE-SCHOOL TEACHERS

QUESTIONNAIRE FOR TEACHERS (unfortunately not all the teachers completed this questionnaire):

Question	Answer
Briefly describe the first month with the child with Down syndrome	Difficult, she often wanders off Unsure of how to "handle" her (discipline). Took time to determine her capabilities. A unique experience
What have you found to be the most difficult aspect to deal with up to now?	To keep her inside and make her understand that she belongs to the group and must do what the group does, and her speech He is unorganised
How are the other children accepting him/her?	Fine, helped by others after a talk No problems, accepted by children, some haven't even noticed (Model C) Wonderfully
How are the other teachers and staff accepting him/her?	Fine, good support from others Positive Very good
What has been the most rewarding moment up to now?	Cutting exercise completed Social acceptance and others making a concerted effort to include her. His dependence on love and performance.
What adjustments must you make in your lessons and routine?	Repeating on an individual level Not much, perhaps in a group she needs more "control" than others Attention, instructions, discipline and care
How is the child with Down syndrome experiencing the school?	Enjoys outside climbing, swimming and Kumon. Difficult in group and perceptual activity Positive. Personal responsibility is a problem
What are your expectations for this child for 1997	Success on his level, reading/writing Bridging year
Examine and describe your attitude towards change in the school system. What kind of changes would you like to see? What changes would be unacceptable to you?	Positive, pleased to see the trend becoming more Montessori-based He has the opportunity to develop. He has been allowed into the school, but now his needs must be provided for
What is your opinion of the workshop?	Positive Very positive
Would you like to attend another workshop during 1997?	Yes Yes
If your answer is "yes", which topics would you like included in such a workshop?	Anything! Reading programme All the aspects mentioned above

Other workshops planned for 1997:

These workshops were opened to parents, professionals and educators (also individuals not involved in the project) and included the following topics:

- Mediation in the classroom (17/05/1997)
- Practical hints from an occupational therapy perspective (21/02/1997)
- Cognitive control therapy (09/08/1997)
- Developmental play therapy (16/08/1997)

In collaboration with DSSA Pretoria branch, a workshop was also arranged at National level at the University of Pretoria with the following topics:

- Inclusion policy of the GDE and support structures available for schools within the Departmental district offices
- Interaction between the parents and the teacher
- Attention and concentration: challenge or problem?
- The how, what, when and where of inclusion in practice; Learning from experience: Primary school teacher from KZN

The following presenters participated: Ms Charmain Botha: representative of GDE Auxiliary Service, Mrs H. Barr, Mrs J. du Toit, Dr I. Eloff, Mrs A. Wessels and myself.

Behavioural problems:

During interviews with teachers, the following behavioural problems were indicated: One learner locked himself in the bathroom, one learner jumped into a mud puddle and frequent incidents of running out of the classroom.

General comments:

Collaboration proved to be very purposeful, but at times difficult to co-ordinate. This also proved to be a time-consuming procedure, also due to travelling time. To my view collaboration needed to be facilitated regularly to be purposeful. I observed the need for further research on ways to facilitate effective, economic collaboration with minimum constraints on time. The generally positive attitude of all the educators involved in the project was enriching. The educators were prepared to share their daily planning with me and often requested advice on adaptations of the curriculum and sometimes also on the individual needs of other learners in the classroom. One of the learners had an assistant and she also collaborated with me.

I generally observed that the educators needed moral support with the initial inclusion of a learner with Down syndrome. The initial workshops with general information, and thereafter, regular discussions provided a context for creative problem solving and flexibility. The attitude of the educator towards dealing with the challenges in a positive way generally solved most issues. Where educators found it difficult to make a paradigm shift towards an inclusive philosophy (although they were accepting of the learner) more behavioural and other problems often arose. Although educators were generally positive and accepted the learner, in some instances the learner was still viewed as a "charity case" and often looked on with pity. Issues between schools and parents had to be facilitated cautiously to maintain the confidentiality of these issues, but also to ensure that challenges were resolved in a satisfactory way. Some schools still felt that the learner with Down syndrome had to perform at the same level as other learners or that the learner did not really "fit" in the classroom.

At the end of the Grade 1 year a function was held to conclude the project and all the learners and schools received certificates.

5.4.2 COLLABORATION WITH OTHER PROFESSIONALS

A very close network was established with specific occupational and speech therapists. This network complemented the support to the learners from all dimensions and a specific focus on sensory integration was initiated during this process. The field of co-morbidity for learners with Down syndrome and other learners was emphasised during this process. A close relationship was informally established on learner performance in the cognitive control battery and difficulties in sensory integration, and this requires further research as it provided useful information for referral and therapeutic support for the occupational therapist and me. Contact was also established with speech therapists focusing on sensory integration at a late stage of the study and this network should be explored further. Both occupational and speech therapy professionals found this collaboration extremely stimulating and enriching for the learner with Down syndrome. In the case of one learner, the occupational therapist initiated therapy very enthusiastically, but later seemed to work with less enthusiasm. The parents were very upset about this process and terminated therapy with the occupational therapist. They also felt reluctant to initiate therapy with another occupational therapist. It was also observed

that the facial expressions of this particular occupational therapist might have had an influence on the development of some behavioural characteristics in the learner. Furthermore, there also seemed to be an indication of the possibility of sensory integration and genetic factors influencing this process.

Other clients also benefited from this network established through the learners with Down syndrome and it was expanded to other professionals in the field (occupational therapists as well as psychologists and they were trained through informal supervision).

The research shows that learners with developmental disabilities may have a dysfunctional sensory system which includes that one or more senses may be either over- or under-reactive to stimulation and it is believed that the problem stems from neurological dysfunction in the central nervous system (brain). Sensory integrative problems are not confined to children with developmental or learning difficulties.

> Sensory integration is an innate neurobiological process and refers to the integration and interpretation of sensory stimulation from the environment by the brain. In contrast, sensory integrative dysfunction is a disorder in which sensory input is not integrated or organized appropriately in the brain and may produce varying degrees of problems in development, information processing, and behaviour (Cindy Hatch-Rasmussen, M.A., OTR/L, Therapy Northwest, P.C., Beaverton, OR97005. Center for the Study of Autism, http://www/autism.org/si.htr.).

The close collaboration with occupational therapists facilitated further informal research on cognitive control therapy, sensorial integration problems as well as the integration of eye movement desensitisation and reprocessing (EMDR) for learners with learning difficulties in my practice. Much dialogue was needed to share the notion of inclusion, as some therapists had the idea that the learners needed to demonstrate the same outcomes as the other learners and needed to be coached to empower them in exactly the same skills as the others. As mentioned above, the therapists collaborated well in completing evaluation reports and the practical implementation of the evaluation reports and IEP were more difficult than expected due to geographical reasons. For practical reasons there was more collaboration and interaction with some therapists than with others. Where possible the therapists also joined in the workshops, which facilitated positive trans-disciplinary support.

It was demanding to manage frequent individual interviews and the sharing of knowledge within the context of the other responsibilities in the project, which then

challenges the viability of this type of individual systemic support. During the Grade 1 year some of the learners moved to other therapists and new relationships were established. A speech therapist introduced the "easy listener system", which excludes background noise for the learner, to one of the learners in Grade 1, with positive results. It improved the learner's level of inclusion, as she received personal instructions without the feeling of being excluded, which reduced her level of anxiety. This was an interesting learning experience for the teacher, the therapists and me. The reactions of the other learners were also very positive as the instrument looked like a portable radio ("walkman").

5.5 SUMMARY OF THE DISCUSSION

In this chapter, I discussed my experiences during the study in the context of the various phases of the study. Phase 1 included the design phase, Phase 2 was the implementation phase for the reception phase and Phase 3 the implementations phase for the foundation phase. This discussion was placed within the ecosystemic framework of the study. The various roles that I fulfilled in the project were also discussed. The findings of my study will be discussed in chapter 6 together with the roles that I played as an educational psychologist. Specific recommendations will also be made.

CHAPTER SIX
DISCUSSION AND RECOMMENDATIONS

6.1 INTRODUCTION

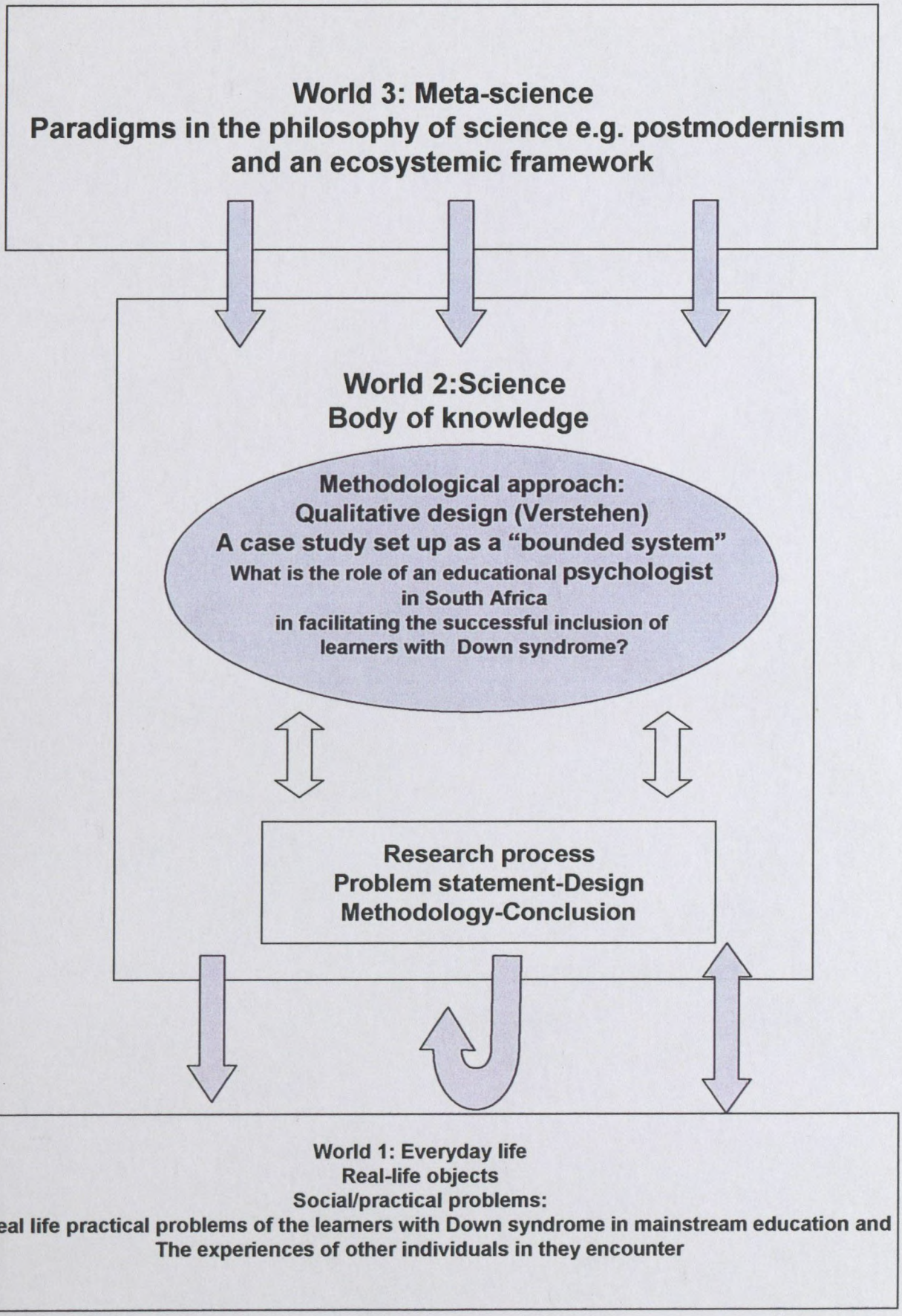
In this chapter I discuss the main themes that emerged from my study. I also make recommendations based on the findings. I use the "Three worlds framework" of Mouton (2000:140) to curtail my discussion. Figure 24 presents a visual display of the role I played as educational psychologist in facilitating the inclusion of learners with Down syndrome .

6.2 DISCUSSION OF FINDINGS

6.2.1 THE ROLE OF THE EDUCATIONAL PSYCHOLOGIST: A THREE WORLD FRAMEWORK

Phases one, two and three of the research produced activities which could be framed within World 1, 2 and 3. The activities included actions in planning and providing support for the learners with Down syndrome, their families and educators. World 2 activities involved systematic procedures that I followed in the production and analysis of data. World 3 involved my continuous reflection on the ecosystemic, constructive postmodern framework in which I was working. However, the actions and reflection that I took could not always be neatly placed within the three worlds because the three worlds are interwoven.

FIGURE 25: THE ROLE OF THE EDUCATIONAL PSYCHOLOGIST: THREE WORLDS VIEW
(Adapted from Mouton,2000:140,141)



6.2.1.1 World 1: Everyday life

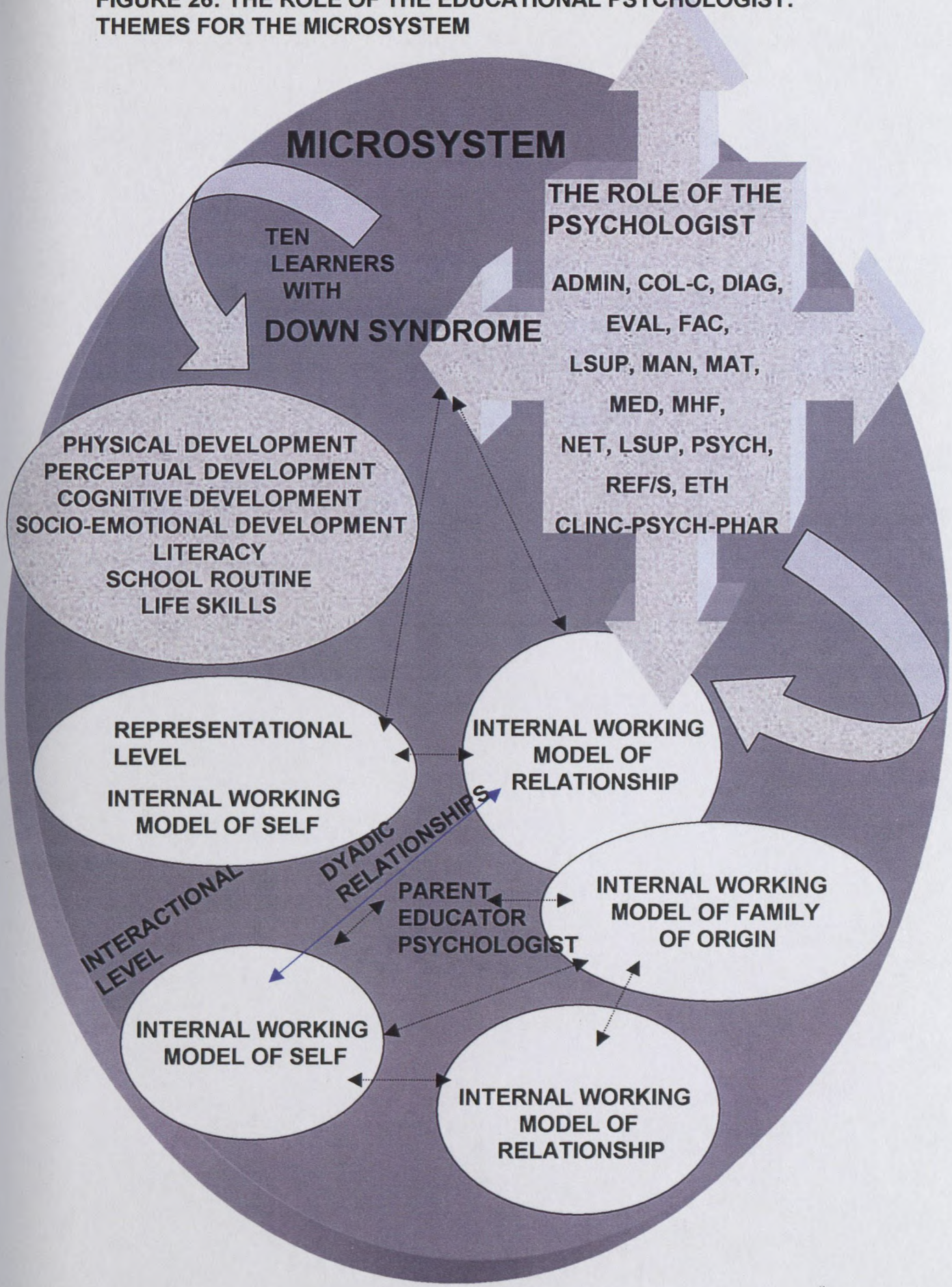
Microsystem

The following themes, for my role as supporting psychologist, emerged for the microsystem[6]. These themes are displayed in Figure 26.

- I played a supportive role in the following dimensions of each of the learners with Down syndrome: Physical development, perceptual development, cognitive development, socio-emotional development, literacy training, general school routine and life skill orientation. In this process I attempted to explore the internal working models the learners had of themselves, the dyadic[7] relationships in which they were involved and their internal working models of their relationships with significant others. The following themes emerged in the roles that I fulfilled in support of the learners with Down syndrome. The codes used for data analysis are given in brackets so as to clarify the visual diagram (Figure26), which reflects a display my role: I acted as administrator (ADMIN), collaborative consultant (COL-C), diagnostician (DIAG), evaluator (EVAL), facilitator (FAC), learning support specialist (LSUP), manager of learning systems (MAN), mental health facilitator (MHF), and reflective practitioner (REF/P). I also reflected on ethical issues (ETH) and issues of clinical psychopharmacology (CLINC-PSYCH-PHAR) in my supportive role. These roles had implications for the learner's internal working model of him/herself, his/her internal working model for relationships, and the internal working models of the parents, educators and myself as educational psychologist where the family of origin also plays a role. To have been able to fulfil my role in the project, I had to do an in depth study of Down syndrome by means of reviewing literature, going to conferences, networking with the Down syndrome association and observing and interacting with the learners with Down syndrome. I found this knowledge base invaluable during the study.

[6] The microsystem refers to the ten learners with Down syndrome
[7] "Dyad" means a "pair" (Longman,1995:490)

FIGURE 26: THE ROLE OF THE EDUCATIONAL PSYCHOLOGIST: THEMES FOR THE MICROSYSTEM



- In my study I found that the Cognitive control battery (CCB) serves the purpose of an effective assessment tool and provides information on the cognitive processes of learners with Down syndrome. My findings supported Eloff's findings (1997:338-339), which she described as follows: Greater understanding of the cognitive processes of learners with Down syndrome is enhanced. Attention deficit is a general occurrence with learners with Down syndrome and the CCB provides more information on the nature of the attention deficit, which is directly supported through Cognitive control therapy. Other developmental problems do not inhibit the cognitive control therapy. Learners with Down syndrome tend to imitate and the interactive nature of cognitive control therapy therefore has a positive effect. Errorless learning is facilitated during cognitive control therapy, as the focus is more on process than error. Cognitive control therapy addresses avoidance behaviour. Learners with Down syndrome have more success in learning situations where external support is provided and this is addressed in cognitive control therapy.

- Due to practical problems during the study, some psychometric tests could not be repeated with all the learners in the study. I constantly reflected on the efficiency of assessment and therapeutic strategies for all learners and often had to deal with the manipulative tactics of the learners. The evaluation of focal attention in cognitive control during the second evaluation was not administered as there was no therapy done in this field, but it would have been interesting to observe spontaneous differences between first and second evaluations. Performance in standardised tests created the impression of limited potential, but through effective therapeutic interaction with a focus on mediation and learning potential, the learning potential became evident in all the learners, even if it was impossible to administer a test with them. I was continuously reminded about the amount of caution with which psychological tests had to be interpreted. The emotional and physical status of the learners also played a role during every evaluation. Issues such as avoidance behaviour, self-concept and frequent failure also influenced the learner's performance. My creativity and flexibility as a person were challenged with a general impression that learners with a specific disability such as Down syndrome challenge theories of learning, assessment and support. This

created an eagerness to explore the unknown. It was evident with all the learners that their input of knowledge was much higher than their output and that education and therapy needed to be contextualised and explored to create a conducive environment and opportunity for the output of knowledge and comprehension. It is obvious that these learners are still misunderstood in general education and communities, due to stereotypes, discriminatory perception and a lack of knowledge. I attempted to refrain from blaming systems and always respected every participant's constructions of the reality.

- I found that inclusion has many benefits for learners with Down syndrome, but the process needs to be facilitated appropriately as there can also be consequences which are harmful to the learners' physical, socio-emotional, perceptual, cognitive and scholastic development, and life skills orientation. The critical elements of inclusive schooling as presented in Figure 6 in chapter two, should be considered and developed to facilitate a more conducive inclusive educational environment for learners with Down syndrome.

- My findings corroborate with Engelbrecht's (1999:9) finding on the importance of values and attitudes toward the success of inclusive education as well as De Jong's (2000:355) findings on the consultant's role in mediation, development of critical thinking skills, OD and power issues – this relates to a systems perspective where the psychologist should look out for being triangulated, but should nevertheless join the system. In a systems diagram Druker and De Jong (1996:28) illustrate the interconnectedness between the three aspects: school, consultant and the interaction between them. The status of the educational psychologist may receive attention through being separate in this model, which indicates that the "consultant is a particular individual and external to the school. The consultant also has a value system and a worldview, which may or may not be congruent with that school, but can be facilitated by self-reflectiveness" (Druker & de Jong, 1996:29). I had to be careful not to be triangulated by parents, professionals or teachers. I constantly tried to focus my voice on what I perceived to be the voice of the learner with Down syndrome and found this in itself to be presumptuous as I always had the feeling that all that we construct as being done to facilitate their

development, were our own constructions and not necessarily their basic educational and socio-emotional needs.

- The learner with Down syndrome reads the early signals of his parents, for example, the parents' attitude during the phase of dealing with the new baby with Down syndrome. The baby may interpret many signals from the parents in a negative way. Through the relationship, the infant can feel overwhelmed or not, and develop the ability to tolerate and cope with frustrations and perceive himself as effective and the caretaker reliable. Affective communication and the reparation of negative affective experiences within interactive relationships contribute to the development of the intrapsychic representational systems (internal working models of self, others, relationships, the world), through which the individual creates meaning about the current situations in which he or she is involved. From that meaning the individual engages in interaction with other peoples and with the environment in ways that are uniquely shaped by that individual's biological, developmental, and interpersonal history and which to observers, appears to have a stable structure that we refer to as personality.

- In summary, it was observed that there were some trends in the performance of the learners with Down syndrome, with the influence of early intervention possibly contributing to some of the strengths observed. I once again became aware of the caution the professional psychologist has to exhibit in the administration and evaluation of psychological tests. I also realised that psychological tests have a role to play towards diagnosis and support, also from an ecosystemic perspective within a postmodern discourse. An important theme that emerged was that Down syndrome as a phenomenon could be explored through the ethical use of psychological tests to discover particular themes in the learners' functioning. Qualitative observations of the learners during evaluation were extremely important and provided me with valuable information on the learning style, temperament and coping strategies of the learners. The context of evaluation could be used to enhance errorless learning depending on the way in which the psychologist creates rapport with and adapts to the learner, without sacrificing standardised principles of evaluation. Learners that initially seemed very difficult to evaluate were later extremely co-operative due to the relationship created with them. This has

implications for the initial evaluation of learners, as a psychologist who does not know a learner may show different test results from those of a psychologist with whom the learners are familiar.

- This indicated that the internal working model of the learner with Down syndrome could contribute to the level of collaboration and performance during assessment and support and not just the learner's intellectual ability or learning potential. The learners became so fond of the support that when I sometimes visited the school to see the teacher, the learner would come with anticipation for a therapy session. I was continuously confronted with their learning potential, which manifested during qualitative observations. This strengthened the assumption that learners with Down syndrome are misinterpreted, indicating that there are many realities constructed about the learner with Down syndrome. My own constructions certainly changed from not knowing what to expect, to a humbling realisation that in many ways, psychological theory had failed learners with Down syndrome, especially concerning psychological assessment and support. The reflective response evoked in me was to learn more about the individual learner with Down syndrome, as this informed assessment and support strategies created opportunities for the individual learner to reach his/her rightful potential.
- The theme of differences/similarity between learners with Down syndrome was observed and the notion that every learner is unique and should be treated in that way was emphasised.
- The use of an individual educational programme was also questioned in my study. It was useful to monitor progress, but was time consuming and excluded the student in the educational programme.
- I was interested in the theme of humour and manipulation, which frequently occurred in the behaviour of the learners with Down syndrome, and its possible links with information processing and intelligence. The structures and the functions of cognition during the first three years of life are important, especially symbolism and fantasy, as they are important for future cognitive development and adaptation. There are relationships between cognition, affect, fantasy, reality and behaviour. The way in which meaning is given to experiences

changes and the goal of this meaning is successful psychological development and adaptation (Eloff, 1997:332).

- I found that all the learners with Down syndrome participating in the study responded well to literacy training with varying levels of progress. The general guidelines as provided in the literature for learners with Down syndrome were applicable.
- All the learners in the study also had difficulties with numeracy. I played a role in introducing various methods of mathematical support. For instance, we explored the Kumon learning programme as this was included in one of the Montessori schools where one of the learners had been placed. It was found that a collaborative approach in learning support within a trans-disciplinary approach was applicable, as this strengthened learning. As seen in the literature, it was found that the learners participating in this study had difficulty with short-term memory and frequent repetition was important. Teachers often discussed the fact that a learner knew information on one day and could not recall it the next. Time constraints in some instances meant repetition created practical problems. Teachers within an outcomes-based educational system had less difficulty finding the time and logistics to repeat instructions or information frequently. I played an intensive role in consultation and support for the educators. The theme continuously emerged that it was not so much expertise as the general feeling of having a support system that the educators and other professionals appreciated. The continuous outcome therefore emerging was that the sharing of knowledge, experience and expertise within a collaborative team was essential and extremely valuable. I attempted to move away from the notion of being an expert. The collaborative relationship that was established provided mutual trust and a relationship of sharing in a comfortable, respectful way. The Down Syndrome Association reinforced this perception.

Mesosystem

The following themes emerged concerning my role in the mesosystem:

- Parents were sometimes frustrated with the role of professionals as professionals sometimes made general suggestions that would not be effective for their individual learner. This experience revealed the limitations in the role that professionals could play towards support for families and emphasised the importance of acknowledging the parents' expertise in coping with their own child.
- Individuals in other systems were often prejudiced toward the learner with Down syndrome, for instance comments were made on how the learner was disciplined and parents were uncomfortable with this.
- Parents felt frustrated with some suggestions and guidelines from other professionals such as that "routine being good for learners" often occurred as some families found it difficult to maintain a routine for various reasons.
- The parents experienced anxiety about the performance of the learners and the amount of pressure they should place on the learner to perform academically.
- Parents often suffered from sleep disturbance, due to the sleep disturbances of some of the learners in the study.
- Parents felt frustrated if the learner performed weaker in a test situation than what he/she usually performed at school or at home.
- The effect of the baby with Down syndrome being the first or second born had different implications for further pregnancy and pre-natal testing.
- There were emotional and practical implications in the family which were often related to the frequent illnesses of individual learners with Down syndrome.
- Intensive home programmes had emotional implications for family life, such as the practical implementation and survival of the family, the influence on the marriage, and the challenges of partners to create time for each other.
- At times, the parents felt frustration with other therapists in the project about issues such as varying support provided, losing patience with learners, and setting standards too high because the therapists were not that familiar with Down syndrome.
- Parents had greater concerns with normal development issues such as puberty especially concerning sexuality for their learner with Down syndrome than they

would have for their other children. There are many sensitive issues regarding this and the reality becomes more challenging with a young girl who approaches strangers with ease and without inhibitions.

- It was also observed that having a child with Down syndrome created many dynamics in various subsystems, such as changes in family friends and some families becoming isolated.
- The issue of having a learner with Down syndrome in a family seems to influence the development of siblings.
- Parents felt tension about how much pressure to put on the learner concerning homework, with regard to reaching the same level as other learners. They also experienced anxiety that the learner may not be allowed to continue in the class or school.
- Parents had concerns that their child may be disobedient at school or exhibit behavioural problems.
- General mediation between the family and the mainstream school where the learner was placed was important.
- Parents who have a learner with Down syndrome often need emotional support, including individual psychotherapy and/or family therapy and parents also benefit from informative workshops. Siblings may also need individual learning support and psychotherapy. My role therefore focused on support towards life-span development for all the individuals of the family.
- Support to the parents involves mediation across various levels of the ecosystem: I had to negotiate and liase with principles, professionals, the Department of Education, Ministry, school clinics and others. Here my role as mediator, manager of learning system, oranganisation developer, administrator and evaluator and collaborative consultant was emphasised. These activities required skilful negotiation, flexibility and patience as well as strict time management.
- Ethical issues around the responsibilities and limitations of an educational psychologist become extremely important. The educational psychologist must understand the "obligation to treat if there is a prior contract that services will be rendered" and his/her legal role as "*bonus pater familias*" (Allan, 1996:1) and where he/she has a right to be assertive and terminate support. One can be triangulated into alliance with parents or teachers due to their unresolved issues

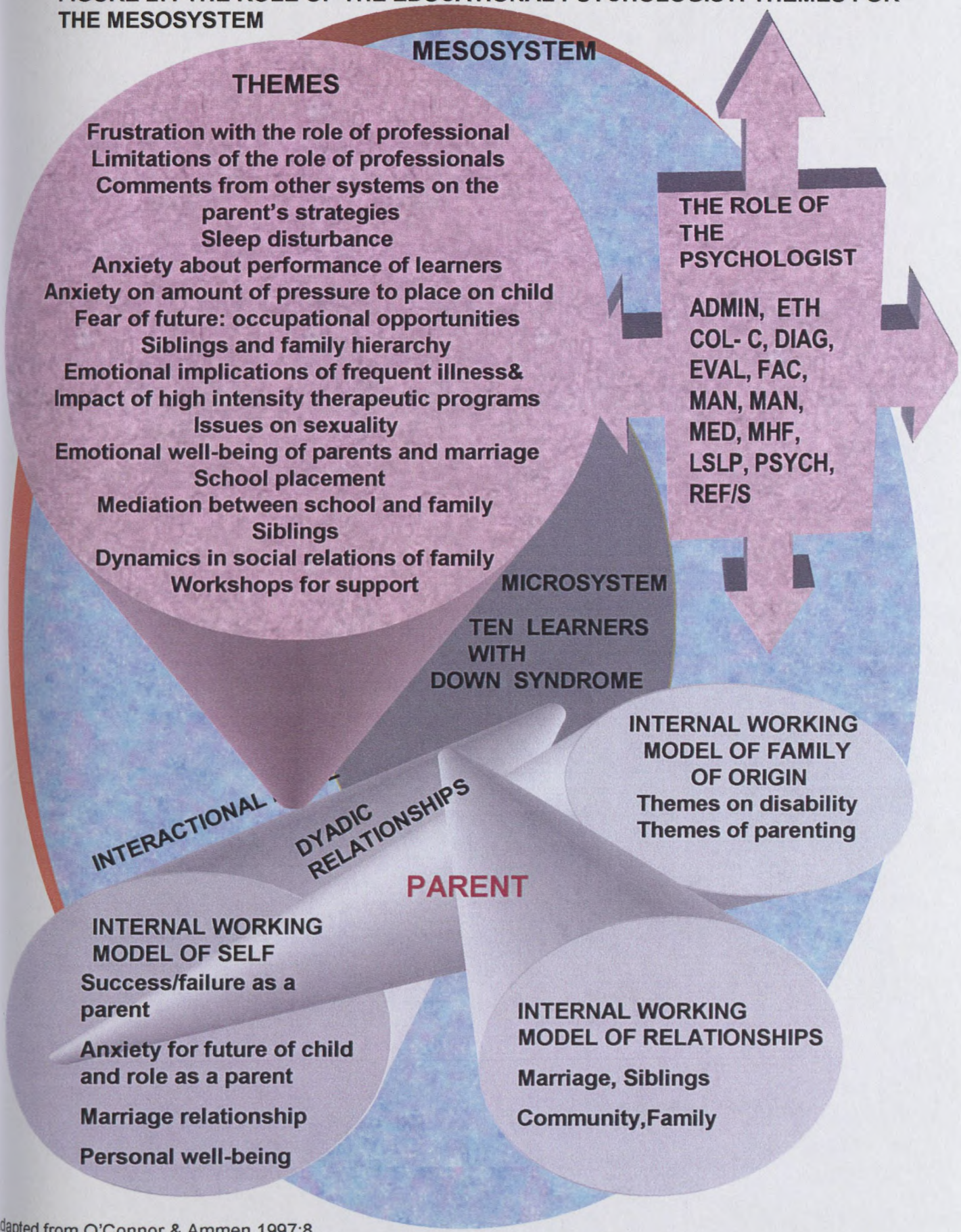
around disability. I often had to reflect to determine what was happening and whether my experiences were my problem (transference issues), the parent/teacher's problem or a systemic problem. This implied that I had to be fully integrated and stable when I joined the systems I supported, otherwise I could easily have been triangulated due to the emotional impact that disability has on people's lives. Legally (Allan, 1996) psychologists need to be careful not to take on dual roles. This becomes impossible within the needs of the South African community.

- I also informed parents about their rights within the South African Schools Act and provided information on inclusion.

My experience of the parents' internal working model of themselves included themes such as their perceptions of their success or failure as a parent, anxiety for the future of their child and their perception of their personal well-being, their working model of relationship issues in their marriage, the siblings in the family, the community and the broader family due to the impact of having a learner with Down syndrome. The themes that were observed in the internal working model of the family of origin were varying themes on "disability" and "parenting" which influenced the interactional level of family dyads. The theme that summarises all these dynamics is a theme of value-judgements, which influences attitudes and behaviour.

In the mesosystem, as illustrated in Figure 27, I fulfilled the role of administrator (ADMIN), an ethical role (PROF-ETH), collaborative consultant (COL-C), evaluator (EVAL), diagnostician (DIAG), manager of learning systems and my practice (MAN), mediator (MED), mental health facilitator (MHF), learner supporter (LSUP) (for siblings), psychotherapist (PSYCH) and reflective practitioner (REF).

FIGURE 27: THE ROLE OF THE EDUCATIONAL PSYCHOLOGIST: THEMES FOR THE MESOSYSTEM



Adapted from O'Connor & Ammen,1997:8

Exosystem and metasystem

The themes that emerged from my support at this level of the exosystem were the following:

- Educators and professionals need to share knowledge and support strategies.
- The educators needed moral support from a professional such as myself, but not as an expert forcing solutions and advice on them, but as an equal stakeholder acknowledging their expertise.
- I mediated collaborative problem solving in the process of searching for alternative possibilities from within the context while considering multiple factors within a circular framework. This process formed part of the goal of mediating holistic life-span development with the learners and their families. Gradually more stakeholders took ownership for the well-being of the individual including the learners and his/her family. I contributed to the process of facilitating transformation in the units of the ecosystem where I was active, through mediation and sharing of knowledge and skills training.
- I focused on mediating multiple causal factors and circularity and found that educators and even professionals find it difficult to move away from a reductionist paradigm.
- The attitudes of teachers in my study varied and I presume that one factor that could contribute to these differences was the internal working models of their families of origin where issues on cultural values and values on diversity were shared with them.
- The themes that emerged from the internal working model of these individuals varied between issues such as that educators did not feel equipped to work with learners with Down syndrome to "I can work with this child". This relates to the literature review in Chapter two (Bradley, King-Sears & Tessier-Switlick, 1997) where the process of change is described. I gave the educators an opportunity to move through individual stages of change, which eventually allowed a shared vision, skills, incentives, resources and an action plan to emerge in each individual setting (refer to Figure Systematic procedures to address change in Chapter two). During this change process educators also moved from perceptions of "I need support" to "I can manage with this learner".

A crucial element in my role was to acknowledge the educators' expertise and ability and not to see myself as an expert with answers. We explored the challenges collaboratively and found alternatives as a team, which stimulated creativity, trust and motivation with the educators. This supports Engelbrecht's (2001:18) discussion on the legitimacy of the "professions' claims about the validity of their knowledge" which is viewed to be based on a positivist epistemology of knowledge. My perception of the themes emerging from their internal working models of the relationship was that they initially worked mostly from a linear way of thought and therefore also defined our relationship in this way. In other words, I as the psychologist had to provide them with solutions to solve the behavioural and learning problems within the learners, otherwise these children could not be in the classroom, as they would disrupt the other learners who also have rights[8]. I saw these working models as developing into a model of the relationship where we worked collaboratively, and we explored multiple factors contributing to the challenges that arose in the classroom. The internal working model of the relationship with the learner would then often also be linear: "The learner with Down syndrome is demanding, challenging". As the educators became used to the learners and their attitudes changed, the attitude I perceived in their working models of the relationship became "It is a good experience to have the learner in the classroom" and they developed a positive relationship with the learner. I also observed changes in the educators who initially had positive internal working models of the relationship between them and the learners, as their perception of disability became less linear (dysfunction within the learner) toward a more systemic approach (circular and multiple factor contributing). The dyadic relationship between the educators and me facilitated and reflected a consideration of multiple factors without blaming the individual (I did not inspect their work and they became more comfortable with exploring various factors when behavioural problems occurred).

- From the regional workshop, varying attitudes were observed, but in general many educators did not feel equipped and they were exhausted due to the training for Curriculum 2005. They were also very concerned about

[8] This is given by means of illustration, this was not the attitude of all the educators

behavioural problems and expressed the need for support from specialists and especially practical guidelines.

- I generally observed that the educators needed moral support with the initial inclusion of a learner with Down syndrome. The initial workshops with general information, and thereafter, regular discussions provided a context for creative problem solving and flexibility. The attitude of the educator towards dealing with the challenges in a positive way generally solved most issues. Where educators found it difficult to make a paradigm shift towards an inclusive philosophy (although they were accepting of the learner) more behavioural and other problems often arose. Although educators were generally positive and accepted the learner, in some instances the learner was still viewed as a "charity case" and often looked on with pity. Issues between schools and parents had to be facilitated cautiously to maintain the confidentiality of these issues, but also to ensure that challenges were resolved in a satisfactory way. Some schools still felt that the learner with Down syndrome had to perform at the same level as other learners or that the learner did not really "fit" in the classroom.
- I tried to facilitate the construction of solutions to problems that arose and balance the needs of the learner and the system as far as possible. In some systems where a medical model was adhered to, this often required stronger advocacy for the learner with Down syndrome to steer the collaborative team towards focusing on the needs of the learner from a systemic perspective. This process was facilitated with more ease in systems with an outcomes-based approach and a Montessori philosophy. The theme that constantly emerged was that the personal attitude of the teacher was an important determinant of her educational strategies and general approach to the learner with Down syndrome and often had a direct effect on the occurrence of behavioural problems.
- Educators and professionals needed to be informed about inclusive education concerning all the guidelines at national and regional level as well as their own, parents' and learners' rights.

- I had to be assertive and knowledgeable about policies and gave input on discussion documents. This required constant reflection and reading.

Figures 28 and 29 summarise the roles I facilitated at the level of the exo- and metasystem. The focus was on my role as administrator (ADMIN), collaborative consultant (COL-C), reflective practitioner (REF/P) and Organisation Developer (OD) for the school situation. At district level, the role of collaborative consultant (COL-C) and facilitator (FAC) was emphasised.

6.2.1.2 World 2: Science body of knowledge

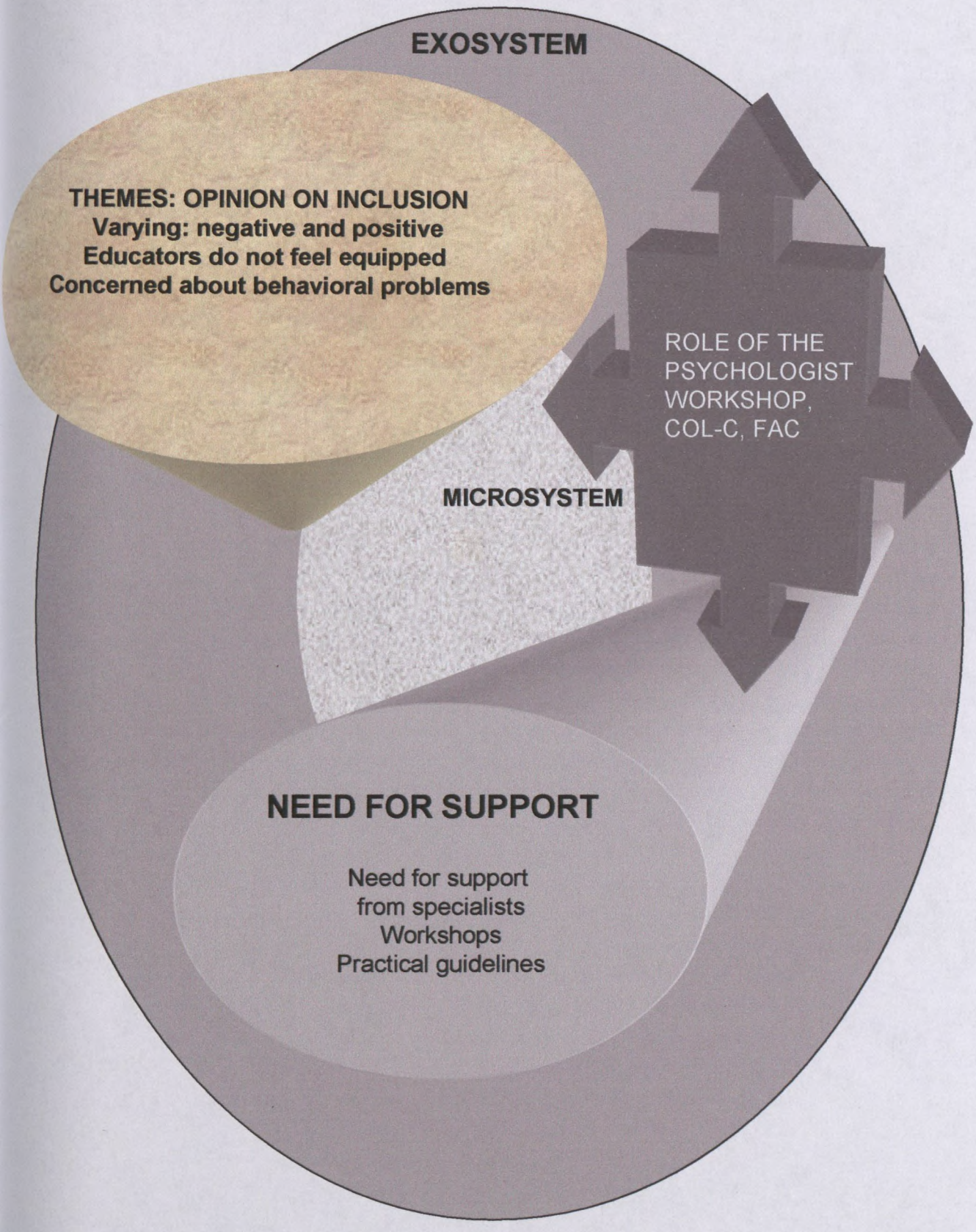
- Throughout my study I realised that teachers, parents and professionals need to become involved in collaborative research on inclusive education viability and existential issues influencing values, knowledge and skills.
- My study revealed once again that we need to evaluate our practices as psychologists to improve our mode of service delivery and professional status.

6.2.1.3 World 3: Meta-science

I reflected critically on the issues of human development and various models such as the medical model of classification, an ecosystemic framework and a narrative approach. My reflections were influenced by Swart (1994:117–120) where phases of reflection are cited as: reviewing the experience, evaluating the feelings and re-evaluating the experience. Swart (1994:124) also notes that reflection develops personal theory, which my experiences in the study supported as my personal theory developed and transcended beliefs and the unknown of certain units analysis such as the learner with Down syndrome. I also reflected on all the issues involved in World 1 and 2 and had to attempt to be faithful to an ecosystemic framework and not be prejudiced or reductionist in my behaviour or attitudes. The microsystem included the learners with Down syndrome's representational level, which included their internal working model of themselves, their dyadic relationships and the internal models of the families of origin. The same issues were reflected on for the teachers, parents, educators, etc. I see much of what was happening in the internal working models of individuals as happening at this level.

FIGURE 28: THE ROLE OF EDUCATIONAL PSYCHOLOGIST: THEMES FOR THE EXOSYSTEM: EDUCATORS, PSYCHOLOGIST AND PROFESSIONALS

FIGURE 29: THE ROLE OF THE EDUCATIONAL PSYCHOLOGIST: THEMES FROM A REGIONAL WORKSHOP



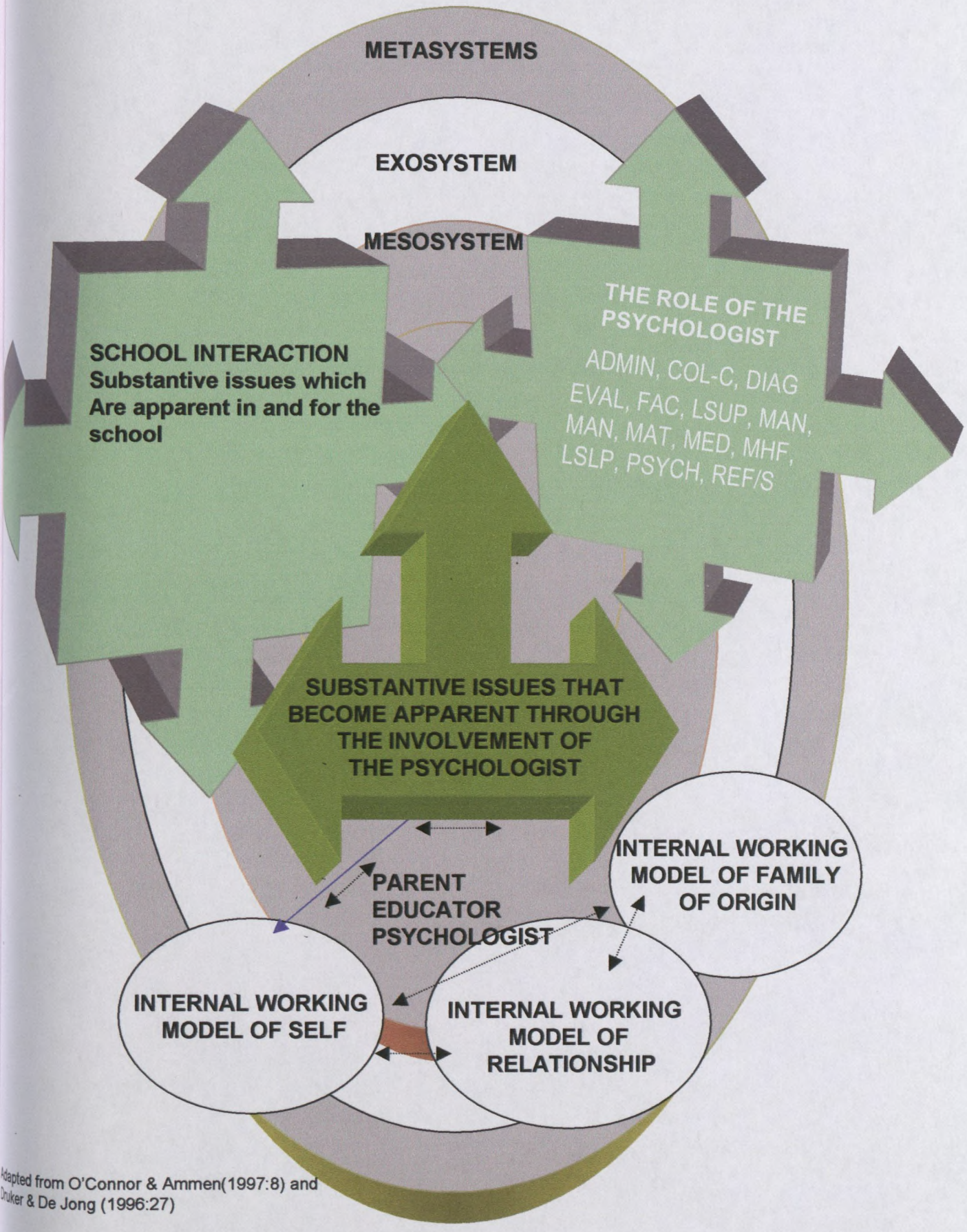
6.2.2 SUMMARY OF FINDINGS

After the journey of this study I am of the view that the educational psychologist has a vital role to play in the holistic development and the inclusion of the learner with Down syndrome within an ecosystemic perspective. The role of the psychologist, as identified during this study, can be summarised in the following themes and is presented in Figure 30 as a framework for dealing with substantive issues:

- Psychotherapist
- Assessor/evaluator
- Mediator
- Researcher/reflective practitioner
- Subject specialist
- Collaborative consultant
- Manager and administrator
- Lifespan development facilitator
- Clinical role in psychopharmacology

The observations and themes emerging from this study emphasise that diagnosis, evaluation and therapeutic support within an ecosystemic framework is essential. This includes the importance of the adoption of a multifaceted role as mental health facilitator. The psychologist needs to demonstrate sensitivity to the internal working models of all the participants and a framework of integrative psychotherapy for support can be useful within an ecosystemic perspective, where Cognitive control therapy, Developmental play therapy and ecoystemic therapy are integrated. During the study it was essential for me to explore various systems as units of analysis, without designating blame. Diagnosis and support were inseparable processes and the goal of therapy was towards facilitating problem-solving strategies to enhance lifespan development for the learner with Down syndrome. These interpretations relate to the ecosystemic work of O'Connor and Ammen (1997). I could generalise many of the strategies and skills that I developed during the project to support other learners and educators in my practice as an educational psychologist .

FIGURE 30: ROLE OF THE EDUCATIONAL PSYCHOLOGIST: FRAMEWORK FOR CONCEPTUALIZING SUBSTANTIVE ISSUES



Adapted from O'Connor & Ammen(1997:8) and Druker & De Jong (1996:27)

From the results of this study I also interpret the internal working model of the educational psychologist as important. During the study I was constantly conscious of my own internal working model and how I constructed meaning during the journey with the ten learners with Down syndrome and their ecosystems. I had to relate my experience to my own worldview, legal and ethical issues, spirituality and professional training. The therapeutic relationship indicates a bond between the psychologist and the client and is relationship centered (Kelly, 1995:88).

I often had to reflect at the level of my own spirituality on issues the parents found difficult, for instance, the meaning of life for learners with severe disabilities. Some parents were comfortable and had made peace with it, but others had only made peace at a superficial level, and still had difficulties at a deeper level. I also had to reflect on the possible influence of this often-unconscious struggle with disability on the dynamics of the relationship with the learner and in the family. Throughout the study I had a deep awareness that there are some spiritual meanings to disability that we are still missing as individuals, educators and professionals. One is the total acceptance and respect for the dignity of every individual, regardless of how severely disabled he/she is. This I found to vary, with a slightly stronger move towards diminishing the rights and dignity of the learner with Down syndrome. Often attempts were made to show compassion and insight but subtle discriminatory remarks actually revealed the internal working model of the individual making the remark. I also had to be conscious of not judging the person making the remark, as these internal working models were reflections of the educator's own personal experiences and constructions. When joining their personal systems, I found it was possible to facilitate attitudinal change in their internal models of themselves and their relationship with the learner with Down syndrome. Here I found that my "intent" played an important role in successfully facilitating the process.

Too often we make decisions for learners with Down syndrome. The ambiguous "we" refers to parents, teachers, social workers, group home managers, and any other person who has the power to influence the lives of individuals who are intellectually disabled. At both the world conferences the voice of individuals with Down syndrome was very strong: They want to be treated as equal, independent individuals and later

adults with the same rights to enjoy a full adult life. There is a movement to provide opportunities. A young man who spent 13 years in an institution for intellectually disabled once mentioned that he had been thinking for a long time:

> "I think the hardest part...is you gotta always defend yourself...You gotta fight...a ...reputation. People decide they know everything about me before they meet me even. They never get close enough to see if there's something inside they might like after all." (Beirne-Smith, Patton & Ittenbach, 1994:215).

Current movements facilitate many actions for individuals with intellectual disability, and new ideas, programmes and treatments are developed. Labels, categories and assessments are designed to place learners in the right place. Advocacy organisations are formed to fight ignorance, discrimination and bureaucracy, but sometimes we become the very thing that we once rallied against with the assumption that if we get everybody else to see it our way, individuals with intellectual disability will be much better off.

> I sometimes wonder what it all looks like from their point of view? Somewhere along the way, we decided we knew best. We didn't ask how they see the world. We've forgotten what human beings really need form each other. Or perhaps we believe something so simple can't be the answer. It's not so hard really, just listen (Beirne-Smith *et al*, 1994:215).

This statement forms the core of the study. During the study I constantly reminded myself of "w*hose voice*?" I was attempting to represent. What are the implications of the above for the educational psychologist in South Africa? A possible answer could be related to the argument of Mikesell, Lusterman and McDaniel (1995:27) where they note that from a postmodern viewpoint where 'knowledge is socially constructed and generative' and knowledge and the knower are interdependent, alternatives 'to modernism-based assumptions and traditions of psychotherapy theory and practice' are provided. Jordaan and Jordaan (1998:33) state that within this framework the research domain of the psychologist scientist becomes the 'dialogical context (also known as discourse) through which ordinary people co-construct meanings'. Anderson (1995:27) and Mikesell, Lusterman and McDaniel (1995:27) are also of the opinion that psychologists should be sensitive to the discourses of society, their profession and their own personal dominant discourses. The marginal voice should be explored and the psychologist should take responsibility in minimizing power

differentials. Within 'a collaborative language systems approach' to therapy a shift in psychotherapy is represented toward using language as the essence of the therapeutic process. The psychologist becomes a co-author of a narrative where dysfunctional categories of people are not created. During a process of discovery the expertise of both the client and the psychologist are combined toward increased humane and respectful support.

> Educational psychologist have and even greater obligation to engage due to their dual role as both psychologist and educationalists. They stand uniquely poised at the interface of the national crises (mental health and education) and this positions provides them with the potential for potent and wide-ranging impact. This impact may be as light as toughing the fragile spider web of the existing social order or as forceful as a bolt of lightning. Whether light or forceful, the interaction should create reverberations, which facilitate transformational growth rather than simply first-order change. Educational psychology as a profession has the potential to co-create contextual differences that make a noticeable difference, but may well instead become caught in a paradox; the paradox of engaging in continual rescue operations which are system-maintaining whilst aiming to engage in empowering processes which promote transformative growth (De Jong & Van der Hoorn, 1993:227).

6.3 RECOMMENDATIONS

The recommendations from my findings have been formulated as outcomes for educational psychologists within ecosystemic levels and relevant literature is integrated with the outcomes. These outcomes focus strongly on the learner with Down syndrome.

6.3.1 WORLD 1: EVERYDAY LIFE

Microsystem

- **Theories of learning:**
  Understand and know brain anatomy and physiology, neurotransmission, memory and the brain, factors affecting the brain. Collaborate with specialists in the field of neuropsychology.

- **Notions of intelligence:**

Conduct assessment from a psychosocial perspective and include observations and recording, clinical interviews, checklists reports and psychological tests. The focus should be on adaptive functioning, neurological data, developmental history, and level and consistency of intellectual functioning as determined by a standardised intelligence test, if the child is testable. Understand the processing habits and cognitive constructs of the learner rather than attempting to identify a level of competence or an area of brain dysfunction. Dynamic assessment such as Feuerstein's (1979) **Learning potential assessment device** and Santostefano's (1985) **Cognitive control battery** are more effective in evaluating certain identified 'cognitive functions', information processing skills and the preferred learning modalities of the learner. Early identification is important, but serious intellectual difficulties are apparent to caregivers and teachers and may be investigated on the basis of their observation. A system which insists on tests results for every child contributes to a false understanding of the nature of intelligence and encourages inappropriate labelling, unrealistic expectations and self-fulfilling prophecies" (Green, 1996:140; Doctor, Dear & Makgamatha, 1996:372).

Educate schools in the revised view on intelligence with Gardner's (Hearne & Stone, 1995) theory of multiple intelligences where a more holistic account of individual potential is offered. Schools are generally deficit-driven and generally ignore intelligences other than logico-mathematical and linguistic, due to fallacious assumption that one's general success in all areas is predicated on one's development in these two areas. Use various direct and indirect intervention strategies to follow up on the assessment such as placement options and individualised programmes, counselling, special challenging programmes (such as for "gifted" learners), medication, neurolinguistic programming, cognitive control therapy, cognitive enhancement. (changing task demands, learning climate and others could be considered) (Green, 1996:141).

- **Diagnosis:**

  Educate professionals and educators towards appreciating that the way a learner is treated is more important than a classification label and promote inclusion and the concept of 'normality'. The interest of the individual should be served through all classification systems (Archer & Green, 1996:123–126; Dyson and Gains, 1993; Donald *et al.*, 1997:232; Mash & Wolfe, 1999:5, 6). Within the context of inclusive education in South Africa, a classification system will ensure that schools are provided with the necessary resources as it may be the only way of guaranteeing the rights of learners with disabilities and difficulties, without implying that these are exclusively categories. In South Africa classification criteria should represent a holistic view of learning and learners who have been disadvantaged need to be identified to facilitate redress and support. The classification of disabilities and learning difficulties can therefore play a positive role in the transformation of South African education and society, but the accountability of professionals and other stakeholders and the flexibility and breadth of the classification system will be crucial determinants in this process (Archer & Green, 1996:129).

- **Biological:**

  Educate professionals, educators and parents to understand research findings indicating that individuals with Down syndrome are able to improve their **motor skills performance** and that a stimulating inclusive environment, physical activity and therapy plays an important role in this process. Provide regular access to experiences that promote muscle tone and general posture such as swimming, horseback riding gymnastics, trampolining and climbing frames. Individual learners should be allowed to progress at his/her own pace and confidence must be built. Encourage proper eating and chewing habits, as learners with Down syndrome tend to be passive eaters due to hypotonia. As learners with Down syndrome traverse the various stages of development in the same order as that followed by other learners, all the knowledge about normal development can be applied in an intervention programme (Cicchetti &

Beeghly, 1990:20; Almeida, Corcos & Latash, 1994; Cunningham, 1996; Jobling, 1994; Latash *et al.,* 1993).

Encourage a focus on a familiar environment, use simple uncomplicated learning materials and give preference to a curriculum based on the **expansion of intact abilities** (Uedker, Mangan, Obrzut & Nadel, 273:1993).

Educate individuals and their caregivers about the **health difficulties and disorders** that need to be observed for people with Down syndrome. A general medical checklist would include the usual health care screening procedures and the awareness that there is an increased risk for certain congenital abnormalities. Specific Down syndrome growth charts should be used to record height and weight. Additional assessments recommended are cardiac, ears/audiology, ENT (obstructive airway disease, eye examinations (congenital cataracts and other), orthopaedic (atlantoaxial instability), occupational therapy screening, endocrine (thyroid), genetics, developmental, gynaecology and psychiatric disorders. A specialist who is aware that elevated TSH levels are sometimes transient in Down syndrome must always do the interpretation of blood tests. The **nose and sinuses should be kept clean** and the learner with Down syndrome should be encouraged to keep his/her mouth closed. **Neck X-rays** are essential for all learners who engage in activities that put the neck under strain. Provide advice and support for families about the **sleeping patterns** of learners with Down syndrome. Provide information on **controversial treatments** such as cell therapy (sicca cell therapy), plastic surgery, sensory integration therapy, massive vitamin and mineral therapy, allergy diets and gluten-free diets, the Feingold diet, Doman-Delacoto method, developmental optometry, chiropractic and medicines (Cunnhingham, 1996; Coleman, 1994; Parsher, 1994; Ohio/Western Pennsylvania Down syndrome Network, 1992; Cunningham, 1996; Hestnes *et al.*, 1991; Selikowitz, 1990; Stores, 1994).

Show insight in the research that numerous caregiver, child, and situational factors exist that alone or together contribute to **self-regulation.** Adopt a multi-

domain approach in the exploration of behavioural responsivity (Cicchetti & Beeghly, 1990:81; Kopp, 1990:248, Merwis, 1990:248).

- **Cognitive:**

  Improve the **auditory short-term memory** of individuals with Down syndrome by using a rehearsal training strategy during lifelong development (Bower & Hayes: 1994:49; (Comblain, 1994; Broadley, MacDonald & Buckley, 1994).

  Encourage the use of **an errorless learning approach**. Success encourages the adoption of task-specific strategies and may place the learner in a better position to deal with the errors necessary for the completion of the learning process. Foster several skills at one time, as certain skills seem to cluster together in development, whereas others are independent (**local homologies**) (Duffy & Wishart, 1994:57).

- **Language:**

  Promote a **life-span developmental approach** with educators and professionals to provide effective **support to language development** and conceptual development. Initiate language programmes as early as possible and involve parents. Intervention should be approached in a componential manner, as one cannot generalise from one language system to another (Rondal, 1991). Focus on encouraging caregivers to **increase their waiting time before prompting** the learner for a response or before suggesting a new topic for play. Follow the learner's lead by allowing the learner to control the focus of joint attention (Harris, Dasari & Sigman, 1996). Choose categories for whole objects during the **sensorimotor phase** and include familiar objects that can be manipulated by the learner. The intervention should be playful and the object labelled frequently. Develop a productive pattern of interaction between educator and learner (Mervis, 1990:295).

  Support learners with Down syndrome **to develop cognitive and communicative** abilities to assist language development. Support secondary educators towards this vision of focusing on the development of the whole

learner throughout his/her life span. Use highly structured language training procedures and at the same time draw upon the naturally occurring language experiences in the learner's life. (Pruess, Vadasy & Fewell, 1987; Farrel & Elkins, 1995; Buckley & Bird, 1994; Aparicio, 1989; Good, Feekes & Shawd, 1994; Powell & Clibbens, 1994; Romski & Ruder, 1984; Messer & Hasan, 1994; Kumin, 1994).

Promote **sign language** especially where there is hearing loss. Encourage learners to make as many sounds as possible and practice oral-motor skills in fun ways. Signing improves attention, self-esteem, motivation, sensitivity to others, inclusion, reading readiness, maths readiness, behaviour management, vocabularies and retention. Apply a **preschool programme** for total communication in teaching manual signs without impeding the learner's oral language acquisition or other parameters of development. Include parents in the training model. Inform educators on the use of the computer as an "access" and a "personal meaning" tool towards learning language (Jago, Jago & Hart, 1984; Meyers, 1994).

Inform educators on issues such as **children's print awareness,** a functional orientated approach to language, **drama and communication,** biofeedback and building on the strengths of the learner when designing reading and instructional programmes for learners with Down syndrome. Introduce a wider range of drinks for good vocal health such as water and fruit juice (Chatterton & Butler, 1994; Pryce, 1994; Saracho, 1984; Sabsay & Kernan, 1993; Jenkins, 1994:13).

- **Personality:**

Provide methods for **managing behaviour** and support families who experience difficulties. Establish proper routine patterns for sleep and daily feeding for the infant with Down syndrome. Support the mother not to rely on the baby to let her know when he wants feeding and encourage sensitivity for the infant's cues (Cunningham, 1996).

- **Early intervention:**

  Encourage educators to commence an intervention programme as **early as possible** (Cicchetti & Beeghly, 1990:14). Encourage educators towards **physical care and physiotherapy**. Develop new models of support for learners with Down syndrome, based on their strengths, challenges and individual needs (Kumin, Council & Goodman, 1994; Buckley, 1994:7). Include a **commonsense approach to intervention** where the educators take the learner's lead. Provide the infant with response opportunities to behave autonomously and give reciprocal feedback. Evaluate parental response in terms of whether it has facilitated or hindered further positive interactions and constructive activities. The parent's praise disrupts the child's attention and fragments the continuity of his/her play. This may cause excessive dependence on extrinsic reinforcement. The use of reinforcement may be more appropriate in other types of interactions such as encouraging self-help skills. Self-help skills blossom when the mother allows the learner with Down syndrome time to respond rather than rushing in with help and stimulation (Carr, 1992; Cicchetti & Beeghly, 1990:136). Focus on guidance to parents rather than an intensive intervention programme. Encourage parents to use **opportunities for stimulation** such as taking the infant into the kitchen. Provide guidance on options for pre-school attendance (Slikowitz, 1990; Cunningham, 1996).

Collaborate with various therapists such as physiotherapists, occupational therapists, speech therapists, special educators and other workers. Inform physicians on relevant issues of Down syndrome. Balance intervention programmes with the obvious needs parents have for coping with their own emotional concerns. Understand that parental involvement is beneficial, but the parent-as-teacher model might be inappropriate for some families and abnormally high levels of contingent responding by mothers of learners with Down syndrome may result in decreases in the frequency of spontaneous social-communicative signals by their children (Fischer, 1987; Slikowitz, 1990; Cunningham, 1996).

Adopt a model of interagency collaboration, which includes a multidisciplinary approach throughout the intervention systems. In a developing country the goal of providing '**equal opportunities for people with disabilities'** is particularly problematic, and there remains an attitude that only highly trained people can administer special education services (McCormick & Hickson, 1996:66).

- **Transition:**

Provide guidelines to educators on the **changes of puberty.** Focus on physical development, mood changes, clumsiness, increased appetite, body odour and sex education. Include topics such as managing menstruation, masturbation, sexuality in general and marriage, having children, contraception and health in adulthood. Issues of social development, safe travelling, preventing sexual abuse and helping the learner to cope with loss (Selikowitz, 1990). Facilitate attitude changes toward the **normalisation** as this principle has resulted in many improvements in the quality of life for individuals with Down syndrome. Make allowance for the disability of a person with Down syndrome. Educate parents on their legal control, citizen advocacy and self-advocacy, individual programme planning (IPP), accommodation ("letting go"), further education, employment (open employment, sheltered employment, activity therapy centers, and leisure. Include strategies to prevent stagnation based on individual choice for the adult years, especially in areas such as community skills and emotional and assertiveness needs. Facilitate community support and access to more leisure pursuits. Motivate parents toward positive attitudes as traditional expectations may prevent change in later life. Facilitate the training of learners with Down syndrome for an occupation, the adaptation of occupations and opportunities provided according to individual capabilities (Brown, 1994:28; Selikowitz, 1990; Perera, 1994). Develop and implement life skills training programmes for individuals and organisations, such as the programme "Talk to Me: A personal development manual for women and girls with Down syndrome and their parents" (D'aegher, Robinson & Jones, 1999).

- **Assessment:**

Facilitate regular assessment of the learner with Down syndrome by

professionals from a number of different disciplines. Conduct a regular review of the learner's placement to evaluate individual educational programmes (IEPs) and general progress (Selikowitz, 1990).

Mesosystem

- **The family:**

  Support the parents of the learner with Down syndrome as soon as possible after the parents have been informed of the diagnosis of Down syndrome. Guide parents towards positive relationships with the infant and in dealing with the initial shock and despair. Support parents in ever-present feelings of conflict. Teach personal coping and social support to deal with stress and give up idealised images of the "super parent". Infants with DS are able to enter into reciprocal interaction with their parents soon after birth. Satisfying reciprocal interactions between parents and the learner with Down syndrome are essential for successful educational support. Provide a commonsense guideline, which will reduce the infant's need for avoidance and defensive manoeuvres in order to protect them from a 'flood' of stimulation that they feel they cannot cope with. To activate and maintain the infant's motivation to play and cooperate with the adult, it is essential to carry out activities within his/her sphere of competence. Mothers of babies with Down syndrome sometimes have difficulties with visual interaction with their children, detecting their needs, attracting their attention and working with them. Various techniques of training benefit development in the area of gross motor skills and practical advice in early motor stimulation is useful. Discourage physical punishment and encourage a harmonious family and a positive attitude from the mother (Carr, 1992; Aparicio, 1988; Berger, 1990; Turnbull, Patterson, Behr, Murphy, Marquis & Blue-Banning, 1993:17; O' Halloran, 1993:28; Schulz, 1993:31; Vohs, 1993:51; Meyer, 1993:91; Poyadue, 199 3:102; Antonovsky, 1993:114; Krauss & Seltzer, 1993:179; Singer, 1993:218).

  Provide guidance on future pregnancies (calculate chances of having another child with Down syndrome), and on tests during pregnancy (Berger, 1990:135).

Provide support for the developmental stages (Ohio/Western Pennsylvania Down syndrome Network, 1992):

Neonatal ***(0–2 months):*** discuss early intervention and refer for enrolment at local programme and DS parent group. Brief in appropriate medical and developmental examinations, application for supplemental security income, consider estate planning and custody arrangements and support family.

Childhood ***(1–12 years):*** Review parental concerns, current level of functioning and programming (early intervention, pre-school and school), ear, sleeping problems, monitor behavioural problems, enrollment in appropriate developmental/educational programme. Yearly educational assessment, individualized educational plan until end of schooling, evaluation for speech, evaluate for possiblity of augmentive communication device. Monitor diet, tooth-brushing, regular exercise and recreational programme. Monitor family's needs, supportive counselling, behaviour management and reinforce importance of good self-care skills.

Adolescence ***(12–18 years)*****:** Review medical history, check sensory functioning, assess for behavioural problems, and address sexuality issues. General and physical examination, monitor for obesity, gynaecologic examinations, hearing and vision every year and thyroid and cervical spine x-rays. Repeat psycho-educational evaluations as part of IEP. Monitor independent functioning. Continue therapies as needed, health and sex education (counselling on abuse prevention), smoking, drug and alcohol education. Begin functional transition planning, twice yearly dental exams. Look at funding possibilities. Continue dietary and exercise recommendations. Update estate planning and custody arrangements. Encourage social and recreational programmes. Register for voting. Discuss plans for alternative long-term living arrangements (community etc.). Reinforce importance of good self-care skills.

Adults *(over 18 years):* Monitor for loss of independence in living skills. Behavioural changes and/health problems, general physical and neurological examinations as with adolescence. Discuss plans for long-term living arrangements, dietary and exercise recommendations. Update estate planning and custody arrangements. Mediate the relation and progressive accommodations between the developing learner and his/her immediate environment. Different settings (home, community and school) and their members are interdependent and events and changes in one unit reverberate throughout other social settings (Bronfenbrenner, 1979a:3). Inform educators on ecological influences as well as the influence of social policy (Dunst, 1995).

- **School:**

Understand the recommendations made by the Department of Education and integrate these guidelines in all strategies towards support: Encourage flexibility in teaching and learning styles, use teaching aids under the guidance of the class teacher, optimal use of existing resources, team work, establish mechanisms for early identification, active support for community involvement and capacity-building for parents (Department of Education, 1997:50). Guide parents comprehensively on inclusive education with the provision of fair predictions. Provide information on placement options. Explore issues such as school transport and safe travelling, with parents (Petley, 1994; Selikowitz, 1990).

To facilitate inclusive education it is important to follow systematic procedures to address change (Chapter 2, Figure 7). Educational psychologists can make an important contribution by being involved as mental health facilitators at various levels of the exosystem.

Encourage school principals and prospective teachers to visit the learner with Down syndrome (home/playgroup), as it will help alleviate anxieties that the class teacher might have. The amount of support needed must be clarified and in place before the child begins school (this reduces tension). Schools should receive advice on inclusive education and parents and school staff need

support once the learner with Down syndrome has begun school (Petley, 1994).

Relate curricular variables functionally to the occurrence/non-occurrence of problem behaviour in the classroom. Behaviour is improved when the learner is engaged in preferred activities, provided with choice and receives attention frequently while engaging in appropriate activities. This supports research on functional assessment and assessment-based intervention (Umbreit & Blair, 1996).

Support educators in adopting a multidimensional role: Educator, researcher, leader, manager, supporter and conflict manager. Motivate and support educators to adopt new teaching styles and methodologies and empower them towards cognitive education and early cognitive enrichment. The Instrumental enrichment programme serves as a vehicle. Educators need to develop faith in themselves, courage to act and understanding of the classroom environment. Include constructivist roots with whole language, cognitive strategies instruction, cognitively guided instruction, scaffolded instruction and make accommodations for learners. Focus on instructional approaches from multiple intelligences theory and cooperative education. Include multilevel instruction and planning for outcomes, practical strategies for communication and peer involvement. Motivate educators to explore the multitude of educational methodologies to facilitate meeting individual needs and to become lifelong learners, reflective practitioners and researchers within the context of outcomes-based education. There are various models available such Life-style planning, McGill Action planning system, and COACH (Bennet & Williams, 1992:74; Boschee & Baron, 1994:193; Botha, 1996:233; Brause & Mayher, 1991:x; Donald *et al.*, 1997:130; Switlick & Stone, 1997:200; Williamson, 1992:135; Brause & Mayher, 1991:21; Malan, 1996:252–259; McNamara & Moreton, 1995:21; Naudé, 1996:161; Sedgewick, 1992; Slabbert, 1996:281; Wadsworth, 1992:60; Wiechers, 1996:180–183; Scott, 1996:237; Skuy, 1996:187, 188; Hearne & Stone, 1995:447).

Evaluate and integrate various educational programs such as the Montessori programme and others (Greenberg, Coleman & Rankin, 1993; Ambush, 1995; Johnson, Test & Algozzine, 1995).

Cognitive education: metacognitive aspects of self-regulation should become an integral part of schooling and the constructive nature of cognitive functions required by formal schooling should be acknowledged. The centrality of a human mediator in the education must be emphasised and educators must work towards enhancing every learner's learning potential and zone of proximal development (Kozulin & Presseisen, 1995).

Adopt a systems approach to support learners with special needs (nationally and regionally) and support rural communities. Establish successful collaboration and make research available to rural communities (Sebastian & McDonnell, 1995). Train educators in the effect of the classroom environment, including physical, social aspects, instructional aspects, teaching/learning processes and materials in teaching/learning and to provide a holistic educational experience within the context of health-promoting schools and whole-school development within the context of the educator as a facilitator and an emphasis on life skills (Van der Merwe, 1996:287). Involve and empower learners in **counselling roles** through **peer co-counselling,** engage with parents through workshops and community outreach programmes, engage with the community and use community resources. Model health practices and create simple procedures such as washing hands before eating in the school routine (Donald *et al.*, 1997:112–114; Unesco, 1993:158).

Provide vocational guidance and expand this service to returning dropouts and street children. Focus on strengths once again and avoid the sense of hopelessness. Facilitate staff development as a process of professional development (Donald, 1997:168).

Support the school in the preparation for the learner with Down syndrome. One might consider discussing the learner with the whole school or

staff before the learner arrives, but that would be the school's choice (Petley, 1994:96). Encourage an individual and whole-curriculum approach (Hart, 1992:106).

Create instructional support teams (IST's) as pre-referral intervention groups that link all school resources to better meet the needs of learners. This programme strives to: assure that educational services are used effectively, provide peer support and problem-solving assistance for educators through a team-based structure, and assist educators who have learners with special needs in the classroom (Kowaleski, Tucker & Stevens, 1996). Accept that **parents are experts** in more than one aspect of their child; parents need to assume equal partnership. Educators need to be reflexive and must not become judgemental if parents are less involved. Success of the learner with special needs contributes to the positive atmosphere of the school (Tetreau, 1995).

Support the school in the planning and writing of an IEP for the learner with Down syndrome if an IEP is indicated. Educate the school about the literature on individual educational programs and involve educators actively. Limit the number of outcomes on an IEP (e.g. upper limit, a set of ten, year long-goals with one quarterly written outcome, written per general outcome, as this forces educators to prioritise (Weisenfel, 1986).

- **Transition**

Ensure that effective educational services are made available to all learners with Down syndrome towards acquiring competencies that would facilitate a satisfying adult life. Revise expectations for learners with Down syndrome and provide opportunities to ensure that their full potential is realised. Typical skills that need to be addressed in school programs are: good attendance records, working independently, appropriate quality of work, motivation to work, ability to ask for assistance (clarify instructions etc), accept criticism, and maintaining work relationships. Educational programmes should provide instruction consistent with job skills that employers view as critical for job success, and

school curricula must become more relevant to the world of work in that particular community. Specialist education programming should utilize employment specialists and job coaches and situations may be staged at job sites. Successful integration training programmes present a challenge for professionals. Individuals need to be independent within their homes and communities and to be socially integrated into all facets of community life as many remain socially isolated (Kregel, Wehman, Syfarth, Marshall, 1986; McCrea, 1993; Bochner & Pieterse, 1996).

- **Biological/genetic:**

Inform health care services on the diagnosis, treatment and management of medical disorders that occur in people with Down syndrome. An active screening programme must be implemented. Effective provision is best provided by good-quality primary health care and regular contact with learning disability services. Liase and facilitate better collaboration between general hospital services and psychiatric services with possible joint assessments and the improvement of health care provision as a whole for learners with Down syndrome and individuals with other disabilities. It is also suggested this includes regular assessment by staff and education of the community (Prarsher, 1994:64).

Inform and train genetic counsellors, as the message from the counsellor must be value-free during genetic counselling. The various options such as to terminate the pregnancy, continue the pregnancy to term and care for infant thereafter, or continue the pregnancy and place the infant up for adoption must be shared clearly. Genetic counsellors should also focus on the positive aspects of raising a child with Down syndrome and possible adverse psychological effects of second-trimester abortions. Support must be provided for coping with the information, as there may be feelings of guilt, denial, anger and unforeseen anxieties. Genetic counsellors need to use a non-directive approach to enable parents to make an informed but independent decision (Peuschel, 1991).

- **Support staff:**

  Link up with relevant NGOs for networking and collaboration. Collaborate with center-of-learning-based teams and include community-based resources and support services (Department of Education, 1997:87). Provide guidelines and support to parents on services and include guidelines provided by local authorities. Provide guidelines to support staff on their role and involve parents in these discussions to alleviate misunderstandings. Services provided could include: the child's key facilitator (one experienced professional who provides support and advice), the child's development center, early intervention services, home help services, Down syndrome association, respite care services, recreational services, after-school and school holiday care, financial assistance, and legal assistance. Learners and families may benefit from the encouragement of practical coping strategies for developing and teaching independent social skills to the child. Parents of difficult children may need increased support and social contact for the learner should be increased (encouragement in informal play and participation in organised activities (Turner, Sloper, Knussen & Cunningham, 1991:21; Petley, 1994; Selikowitz, 1990).

Explore initiatives to protect learners with Down syndrome from sexual abuse, physical abuse and neglect, as there is an overrepresentation of disabled learners. Collaborate with Child Welfare and developmental disability workers in exploring procedures that prevent disabled learners form getting lost between systems. Ways should be considered to ensure that developmentally disabled learners are identified, assessed and tracked. The unique needs of such learners require protocols for determining minimal and desirable services and for monitoring the degree to which parents follow through with indicated services. Developmental specialists could be designated to assist CPS staff as consultants and diagnosticians. In-service trainers should upgrade the skills and knowledge of all child protection workers (Schilling, Kirkham & Schinke, 1986).

Facilitate educational support through adequate identification, evaluation and counselling (Donald *et al.*, 1997). Support and collaborate with specialised centers of learning during the transition phase for preparing learners for inclusion, extra-curricular activities, early childhood development programmes and promoting community events for inclusive education and a preventative and developmental approach to support (Department of Education, 1997:57).

Provide support from an approach of integrated therapies: "Integrated therapies focus on the inclusion of related service providers into the comprehensive educational plan" (O'Toole & Switlick, 1997:203). Facilitate a paradigm shift towards shared ownership and commitment by professionals to educate all learners (Ferguson,1995). Therapies such as physical therapy, occupational therapy, speech/language therapy, school health services, school psychological services and other consultants are referred to. Include **transdisciplinary models**. This model has primarily been implemented with children with severe disabilities. It is characterised by information sharing across traditional discipline boundaries. The curriculum is learner centerd and integrates hands-on experiences. Integrating therapy is an evolutionary process and educators and professionals should be informed and motivated towards acceptance (O'Toole & Switlick, 1997:213; Rainforth *et al.*, 1992; Smith, 1990).

- **Community:**

  Educate and inform the community on disability and the responsibility of the community. People's perceptions of intellectually disabled handicapped persons are both more complex and less likely to change through increased contact than is generally acknowledged (Williams, 1986).

Exosystem and metasystem

Collaborate on establishing an alternative model for South Africa as this is urgent and complex and requires a radical restructuring (Donald, 1996:71). Remain informed at all levels and inform other stakeholders about relevant issues. Comment actively on draft policy documents and attempt representation on important committees.

6.3.2 WORLD 2: METASCIENCE

- **Theories of learning:**

  Conduct brain-related research and methods of investigation in collaboration with other specialists in the field (Mann *et al.*, 1992; Beaumont, 1993; Walsh, 1987:3).

- **Notions of intelligence:**

  Study the structure of complex cognitive activities involved in exploiting the possibilities of the symbols and technologies evolved and used in different cultures and societies. The examination of relationships between traditional and practical forms of intelligence and the possible identification of new forms of cognitive functioning remain critical research themes for the future (Olson, 1986:358; Willis & Schaie, 1986:265).

- **Diagnosis:**

  Striving towards a scientific approach to the study of abnormal child psychology is a way of thinking about how best to understand and answer questions of interest – not an accumulation of specific methods, practices, or procedures and conduct research on current classification systems (Mash & Wolfe, 1999:96).

- **Biological:**

  Conduct research towards understanding developmental and individual trends in **self-regulation** and specific mediators of problematic self-regulation (Kopp, 1990:248). Explore linking **family functioning and child developmental outcome** and follow a developmental perspective. Develop alternative approaches to assessment and interventions for learners with Down syndrome guided by the transactional model and the organisational perspective. A life-span perspective observes deterioration in the social relations of this population with increasing age. It must be understood that behaviour may be influenced by physiological factors, and development in one domain, such as peer relations, remains closely linked to similar processes in other domains, such as cognition and language processes (Cicchetti & Beeghly, 1990:55;

Serafica, 1990:393). Explore the origins and the nature of **sleep disorders** and ways of treating them effectively (Stores, 1994). Conduct research on **sensorimotor development** as evidence regarding the relationship between heredity, etiology, the environment and sensorimotor functioning and social development . Explore the aetiological differences in the determinants of handedness (Cicchetti & Beeghly, 1990:225; Almeida et al, 1994; Lewin *et al.*, 1993).

Attempt **cross fostering of abnormal and normal development theory** and investigate explicitly the pattern of individual differences in Down syndrome. Focus on the study of multifactorially crucial psychological mechanisms and habituation-dishabituation deficit as there are persistent reports that infants with Down syndrome are more 'riveted' and visually attentive than normal infants. This could possible stem from a failure of basic neurological inhibitory capacity, or reflect a 'developmental' difference of longer processing or 'schema construction time? Study the **cognitive and attentional** correlates of learners with Down syndrome. Assess multiple domains of development concurrently as the infant does not engage in the world with single competencies. Assess the environment in which learners are expected to develop and function. Explore approaches such as **errorless learning** (Beeghly *et al.*, 1990:362; Duffy & Wishart, 1994; Wagner, Ganiban & Cicchetti, 1990:174, 175; Cicchetti & Beeghly, 1990:14).

- **Personality:**

Explore the social display of rules of emotions; accurate techniques for measuring neurotransmitter activity; knowledge of brain and behaviour relations and encourage the formation of multidisciplinary research teams to investigate common areas of functioning. Conduct research on temperament using questionnaires to determine the impact of parental biases on ratings of their children and to provide guidelines for dealing with problem behaviour of Learners with Down syndromes (Cicchetti & Beeghly, 1990).

- **Language:**

  Initiate descriptive studies on **early language development**, **intelligibility of speech** and **the communicative and linguistic functioning** of learners with Down syndrome from a life-span development perspective. Establish an empirical basis and a comprehensive theoretical and intervention approach to inform educators and adapt societies to their needs and potential. Investigate issues such as **primary and secondary impairment** theories and exert caution when attempting to generalise about more specific symbolic domains such as symbolic play development. Explore the merits of **manual signing systems, educational issues** such as employing personal topics with teaching methods, the role of the computer in language communication and text and the effective use of cooperative groups on the microcomputer. Explore the language taking place during episodes of joint attention and various parameters of caregiver speech, as the **speech of caregivers** of learners with Down syndrome seems to be different from caregivers of other learners. In collecting linguistic data on learners with Down syndrome it is beneficial to have the mother keep the records as she is likely to understand what the child is intending to say (Beeghly *et al.*, 1990:362; Jago *et al.*, 1984; Meyers, 1994; Cosden, 1989; Wagner, Ganiban & Cicchetti, 1990:174, 175; Cicchetti & Beeghly, 1990:14; Sabsay & Kernan, 1994; Rondal, 1988; Kumin, 1994; Lynch & Eilers, 1991; Harris, Kasari & Sigman; Rutter & Buckley, 1994).

- **Emotional:**

  Initiate research on the factors contributing to **unrealistic perceptions of psychological empowerment** in adolescents who are intellectually disabled (Wehmeyer, 1994).

- **Transition:**

  Collect information from individuals with Down syndrome to provide validation for ways in which we measure/judge community integration and adjustment and study the quality of life of adults with Down syndrome. Analyse the variables that influence the selection of an integrated leisure experience and factors that encourage free choice of participation. Identify the areas of

competency of adults with Down syndrome and the types of individuals affected by **institutionalisation** at facilities of varying quality (Bybee, 1990:225; Brown, 1994; Neumayer *et al.*, 1993; Rosen& Burchard, 1990).

6.3.3 WORLD 3: METASCIENCE

- Reflect critically on various theories for psychotherapy, learning support, assessment and education in general.
- Reflect on a personal worldview and develop an educational theory for South Africa.
- From my personal reflections at a World 3 level, a possible training programme for psychologists was formulated:

6.3.4 A TRAINING FRAMEWORK FOR EDUCATIONAL PSYCHOLOGISTS

The process of reflection in my study and the changes in my personal career brought about an exploration on the issue of further training for educational psychologists. In 1998, I was appointed at the University of Stellenbosch as coordinator of the training programme for educational psychologists. My study influenced the framework that I foresee for the training of educational psychologists in South Africa. In the context of the core competencies prescribed by the Professional Board for Psychologists, a literature review and the role of the educational psychologist, as observed in the support towards the development and inclusion of the learner with Down syndrome, critical outcomes, specialisation areas and future professional roles are identified for the Educational psychologist. The critical outcomes presume an underpinning knowledge base of psychology and its sub-disciplines as well as that of related disciplines. It also assumes that this knowledge base is ever expanding and that all levels of professionals should make it their duty to seek out continued education opportunities on a regular basis (Foxcroft, 1998a).

I view the collaborative nature of the psychologist's role as extremely important especially concerning holistic life-span development and collaboration with all primary health care facilities. Nastasi *et al.* (1998:218) note that the need for educational

psychologists to become involved in mental health programming is linked to "the increased awareness of stressors and concomitant mental health problems among youth". The following conceptual model, which can be used as a guide and for evaluation of programmes is suggested (Nastasi *et al.,* 1998:218):

- Programming reflects an integration of theory, research, and practice.
- Programming is framed within an ecological-developmental theoretical model.
- Programme development, implementation and evaluation reflect a collaborative/ participatory model.
- A continuum of mental health services are provided, ranging form prevention to treatment.
- Programme evaluation addresses programme acceptability, integrity, and effectiveness.
- School psychologist(s) is(are) involved in one or more aspects of mental health programming.

The critical outcomes for the training programme:

The psychologist should be able to:

- Solve problems within the profession with responsible decisions shown to be the result of critical, creative and reflective thinking.
- Collaborate effectively with others within various professional contexts at all levels of the exosystem.
- Manage themselves and their professional practice in a responsible, effective and ethically acceptable manner.
- Collect, analyse, organise and critically evaluate information about educational and psychological phenomena.
- Communicate effectively and professionally using visual, statistical and/or language skills in the modes of oral and/or written presentation.
- Use science and technology effectively and critically, showing responsibility towards the environment and health of others with a specific responsibility towards mental health.
- Show the ability to explore a variety of learning strategies towards learning.
- Demonstrate responsible participation in communities at a local, national and international level.

- Show the ability to be culturally and aesthetically sensitive across a range of social contexts.
- Show the ability to explore, assess, explain, facilitate, restore and predict life-span educational, psychological and vocational functioning concerning individuals, groups and self-development.

The educational psychologist also needs to demonstrate expertise in the following specialisation areas (Roberts et al., 1998:293):

- Life-span development education and psychology.
- Life-span development psychopathology.
- Issues of diversity.
- Child, adolescent, adult and family evaluation and assessment methods.
- Contextual and holistic educational and psychological intervention strategies.
- Prevention, family support, and health promotion.
- Reflective practice: research methods and systems evaluation.
- Exosystemic educational and psychological management and administration.
- Professional ethical and legal issues pertaining to children, adolescents, adults and families.
- The role of multiple disciplines and service delivery systems towards primary mental health promotion.
- Social issues affecting children, adolescents, adults and families.
- Clinical psychopharmacology.

The following core roles can be identified for the educational psychologist:

- Assessor/evaluator (psychological and educational)
- Psychotherapist/counsellor (intervention, development)
- Specialist in learning support/learner supporter
- Researcher (reflective practitioner)
- Subject specialist
- Collaborative consultant (systems change agent/whole school development)
- Mediator
- Administrator, manager and policy developer

- Life-span development facilitator (mental health: psychosocial rehabilitator and psychodeudationist)
- Clinical role in psychopharmacology.

In the context of the policy of the Professional Board for Psychology(1999) on roles and training, the following core competencies are described for the above roles of the educational psychologist (EP):

Assessor / evaluator (psychological and educational):

- The EP has experience and is able to facilitate specialized screening, in-depth interpretation and diagnosis. This includes expertise in describing, assessing, explaining and predicting human / organisational functioning at all levels of the exosystem by using appropriate assessment measures and procedures. This includes individual intelligence assessment, educational assessment, personality and behaviour assessment, diagnosis and assessment for mental health.
- The psychologist facilitates specialized systemic analysis at all levels of the exosystem. This implies consultation during pre-referral intervention, identification, evaluation and diagnosis of the learner with special educational needs within the context of outcomes based education in South Africa.
- The EP demonstrates skills in training teachers and parents in the identification of behavioural, learning and emotional problems and the design of learning support programmes.
- In addition to this the psychologist will train teacher support teams to synthesize information on the learner from an inclusive perspective.

Psychotherapist:

- The EP is able to facilitate specialized and advanced exosystemic counselling, psychotherapy, life-span psycho-education and training and learning support.
- The EP demonstrates thorough knowledge of counselling theories.
- The EP demonstrates specialized skills in crisis intervention, individual- and group therapy, family and marital counselling, career counselling and learning support.
- The psychologist develops and maintains constructive relationships with clients within diverse contexts at a specialized level.

- The psychologist promotes, restores, sustains and enhances effective functioning and a sense of well being in clients through preventive, developmental, or curative interventions from an integrative perspective with a focus on mental health care issues of the educational counsellor as well as all other issues pertaining to the profession of the psychologist.

Subject specialist and specialist in learning support/learner supporter:

- At a specialized level the psychologist is thoroughly versed in the code of conduct ascribed to by the profession and the constitution and will practice and promote a critical, committed and ethical attitude towards developing a sense of respect and responsibility towards others at all levels of the exosystem.
- The psychologist will be well grounded in the knowledge, skills, values, principles, methods, and procedures relevant to the discipline, subject, learning area and or phase of study. The EP will be specialised in the different approaches to assessment, prevention, intervention and development to facilitate life span development and how these may be used in ways which are appropriate to children, adolescents, adults, families and communities in their context at various levels of the exosystem. The EC will have a specialized understanding of the importance of families in psychological and educational development.
- The psychologist will have expertise in the content appropriate to the specialization area.
- The psychologist will demonstrate specialized knowledge of subject content and various principles, strategies and resources appropriate to teaching in a South African context (Cotep, 1998).

Researcher and reflective practitioner:

- The psychologist will achieve specialized ongoing personal, academic, occupational and professional growth through pursuing reflective study and research in his / her professional practice and area of specialization, in broader professional, educational and psychological matters and in other related fields. In addition to this action research facilitates reflection which promotes the development of reflective practitioners and the self-construction of the learning process.

- The psychologist will demonstrate expertise in a systemic approach to problem solving and professional development which implies that the dimensions of the problem are specified within a specific context and action is taken to solve the problem. This includes a self-reflective process of critical questioning by the reflective practitioner on a scientific responsible means.

Collaborative consultant:

- The psychologist will promote whole school development by demonstrating the specialized ability to develop a supportive empowering environment for the learner and educator and respond to the educational and other needs of clients and fellow educators.
- In addition, the psychologist will develop supportive relations (direct or indirect) with parents, educators and other key persons and organizations at all relevant levels of the exosystem based on a critical, specialized understanding of community development and primary mental health care issues.
- The EP will understand and interpret provided learning programmes, design original learning programmes, identify the requirements for a specific context of learning, coordinate and facilitate teacher support teams, community based networks and multi-disciplinary collaboration. The EP will also select, sequence and facilitate learning in a manner sensitive to the differing needs of the subject/learning area and learners.
- The EP will effectively and sensitively facilitate collaborative interactions so as to facilitate growth and to enable clients to acquire knowledge, skills and attitudes. This includes in service training and staff development, focussing on the development of reflective practitioners, effective classroom management, curriculum development and the support of educator's needs.

Mediator:

- The EP will facilitate learning at a specialized level and in a manner which is sensitive to the diverse needs of learners; construct learning environments that are appropriately contextualised and inspirational, communicate effectively showing recognition of and respect for the differences of others.

- The EP will demonstrate expertise in facilitating effective communication between parents, institutions, the government, policy developers and the community at all levels of the ecosystem.

Administrator, Manager and Policy developer:

- The psychologist will make decisions appropriate to the level, manage a professional practice, carry out administrative duties efficiently and participate decision-making structures at various levels of the exosystem. The competencies will be performed in ways which are democratic, which support clients and colleagues, and which demonstrate responsiveness to changing circumstances.
- The EP will interpret and review policy documents and contribute in policy making.
- The EP will co-ordinate multi-disciplinary meetings with teacher support teams at a specialized level.
- The EP effectively manages all professional administrative functions which include case management, report writing on progress, on goals, actions and outcomes and referral to other specialists.
- The EP is able to efficiently arrange, organise and manage his/her professional activities so as to deliver an efficient service to the public.

Life span development facilitator:

- The EP will focus on specialized, creative problem solving, which implies a meta-approach to systems change and includes the principle that learning and development are integrated experiences within a specific context. This process facilitates joint ownership of outcomes.
- The psychologist will initiate and facilitate life skill programmes for parents, teachers, learners, communities and EC.

Clinical role in psychopharmacology:

- The EP is well versed in the study of natural and synthetic substances (i.e. drugs) that affect cognitive and emotional functioning and the treatment of mental disorders with medication.
- The EP is able to determine whether to refer a patient for treatment with medication.

This framework would address the "Three world framework" (Mouton, 2001) as follows: First, all the outcomes would impact on World 1 as practical skills, values and knowledge for the practice of the educational psychologist. All the roles are applicable for this world. Every outcome would be applicable to World 2 if roles and function were made the objects of systematic inquiry with a specific focus on the role of researcher, as the educational psychologist has the responsibility as a reflective practitioner to do research on all his/her practices. For World 3 all the outcomes are relevant once again, but in this world the educational psychologist focuses on the role of reflective practitioner where he/she reflects about his own being, worldview and the theoretical framework of his/her practices. When the inquiry of World 2, in other words research itself, becomes the inquiry, World 3 comes into play. It is important to note that the boundaries of World 1, 2 and 3 are useful, but not always clear-cut. The boundaries between the role of a psychologist as practitioner and as researcher are integrated in the role of reflective practitioner (Swart,1994). In my study , I functioned as a psychologist (World 1) and continuously reflected about my role and on the metatheories (such as exosystem and postmodernism) informing the process of inquiry. My reflections and practices on my role were documented systematically (World 2).

However, my study shows that although Mouton's (2001) "Three worlds framework" is a useful heuristic model to create a more nuanced perspective understanding of the role of the educational psychologist in supporting learners with Down syndrome, in practice the three worlds are not always neatly delineated and the boundaries become blurred, as pointed out by Mouton (2001:140–141) and cited in chapter one of my study. In theory you can delineate the boundaries.

6.4 CHAPTER SUMMARY

In this chapter my findings for the study were discussed in detail and specific recommendations for educational psychologists were formulated as outcomes. This

discussion was presented within a Three worlds framework. Suggestions for the training of educational psychologists were also made.

CHAPTER SEVEN
SUMMARY AND CONCLUSION

7.1 INTRODUCTION

My study investigated the role that an educational psychologist might play in facilitating the inclusion of learners with Down syndrome into mainstream education. My research problem was described within Mouton's (2000:137) "Three worlds framework".

7.2 SUMMARY

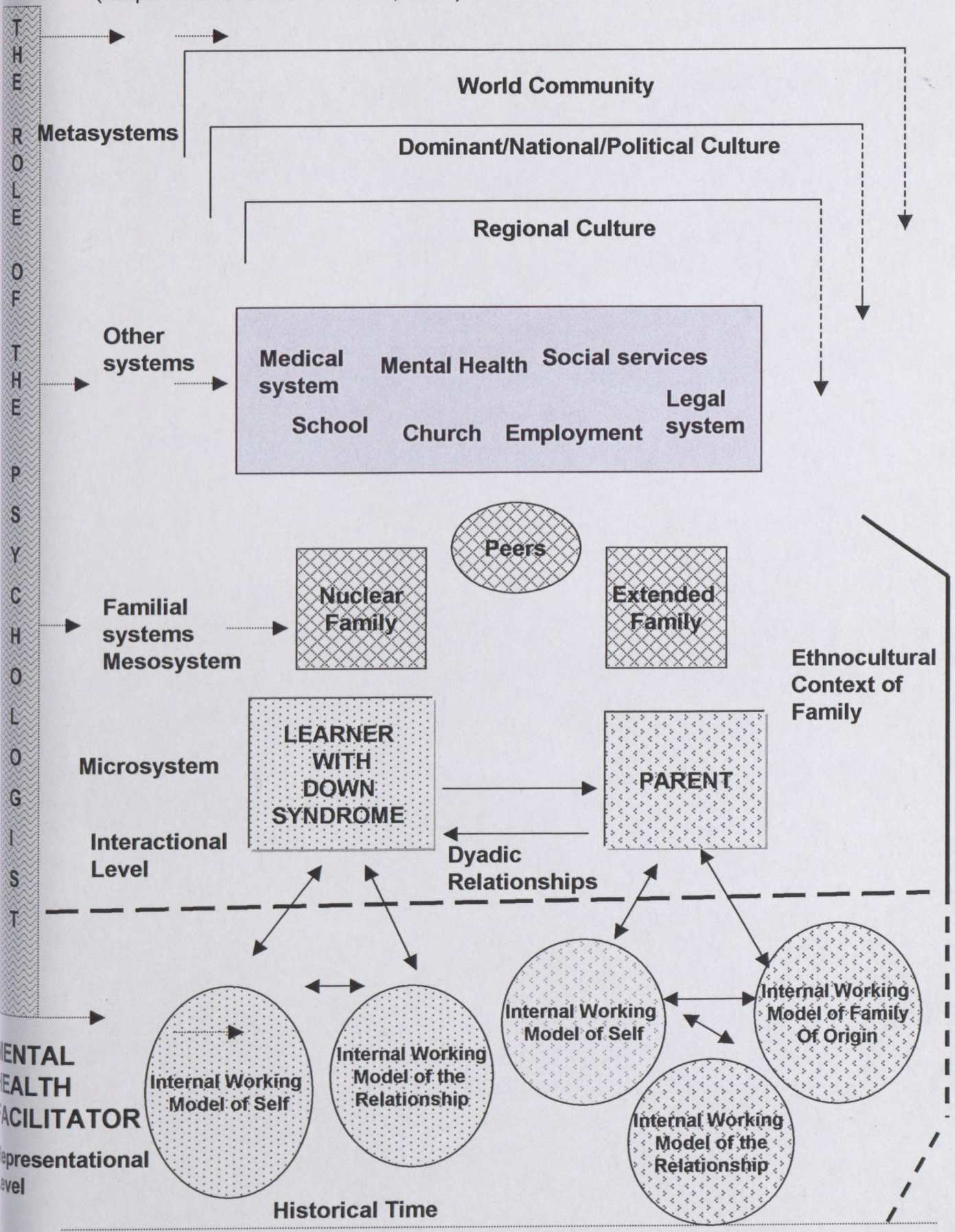
The current South African context creates an urgent need to redefine the role of educational psychologists. Many uncertainties create several unanswered questions on how the viability of educational psychology and the essentiality thereof can be ensured at various levels of the ecosystem. Until recently educational psychologists focused on working with individuals, with little emphasis on facilitating systems change. Educational psychology was viewed as an *"elitist"* service in the past, of which a small, advantaged sector of South Africa was able to make use. In a complex and diverse society such as South Africa the educational psychologist needs to justify his/her professional role and mode of service delivery (Van der Ryst, 1995).

Transformation in the education system has also initiated changes in the Department of Education's mode of service delivery. Strategic areas of change in South Africa include: capacity building in all education departments; strengthening the capacities of all advisory bodies; new district-based support teams will be provided and special schools will be converted into resource centres; full service schools, public adult

learning centres and further higher education institutions will be established as well as institutional-level support teams; the development of the professional capacity of all educators in curriculum development and assessment, quality assurance and improvement; mobilising public support; and developing and pre-testing resourcing instruments of the programmes (Department of Education, 2000:25–30).

The above scenario sets the scene for my study. In chapter one, I described the research project in which I was involved and presented the socio-historical context of the study. I also clarified relevant concepts and introduced the following chapters. In chapter two I reviewed literature on inclusive education in South Africa and highlighted the role of support. I focused on issues such as the new thinking in special needs education, guidelines at international, and at national and regional level within an ecosystemic perspective. These guidelines informed my case study. In chapter three I discussed educational psychological support for learners with Down syndrome within an ecosystemic framework. Issues around identification, diagnosis and classification were also discussed. Chapter four described the research process of my study. The various components of the research design were discussed, which included a literature review, theory framework, practical implementation and the research methodology. In chapter five I presented critical reflection of my perceptions and experiences during the study. Various themes were identified for the role of the educational psychologist in support of the learner with Down syndrome. Chapter six consisted of a discussion of the findings and recommendations for the role of the educational psychologist. Suggestions were also made for the training of psychologists. Chapter seven includes concluding remarks, a summary of the chapters, an overview of the limitations of the study and reflections. This section is concluded with a graphical presentation of the scope of the educational psychologist's practice in Figure 31.

FIGURE 31: THE SCOPE OF THE EDUCATIONAL PSYCHOLOGIST's PRACTICE WITHIN AN ECOSYSTEMIC FRAMEWORK
(Adapted from O'Connor & Ammen,1997:8)



7.3 LIMITATIONS OF THE STUDY

Concerning my role towards support of the learners, I observed similar limitations in my study as those of Eloff (1997:213). The circumstances and environment for cognitive control therapy was not always under ideal situations. The therapy could therefore have been more effective, but on the other hand the circumstances reflect the general environment in which educational psychologists in South Africa will practice. I hold the position that psychologists need to develop flexibility and creativity in their approach.

Due to the time limit of this study, it was not possible to follow through all the phases of cognitive control therapy with the learners. There was only progress up to the middle phase of the therapy. The learners would have benefited more if the therapeutic process could have been completed. For ethical reasons I attempted to ensure full closure was given at a psycho-emotional level of support.

Due to the small sample size, the generalisation of the findings of the study is limited. A specific limitation in this regard is that the sample is not representative of the South African community. As disability becomes normalized, the possibility to do research with a larger segment of the South African community will be greater.

Although various systems are distinguished in my study, these distinctions remain artificial. I understand the systems, as described in my research report, as integrated from micro- to meta-levels, with permeable lines between the systems. My exploration of the field of ecosystems only touches on the complexity of human existence and the complexity of Down syndrome and intellectual disability in general. I used particular constructions like an ecosystemic framework, a case study method and the "Three worlds framework", which gave a particular meaning to my study. Therefore, there is a need for further exploration of the role of educational psychologists from alternative theoretical frameworks and methodological orientations, so as to expand the knowledge base and provide a more nuanced understanding of the role of

educational psychologists *vis-á-vis* intellectual disability.

The ecosystemic framework from which I conducted my study served as a useful framework, but it has limitations, specifically because of the personal way I constructed the meaning in my study. During the process of my own professional development I have developed towards a narrative framework. Exploring the unit of analysis of this study from a narrative framework could open further possibilities.

7.4 CONCLUDING REFLECTION

My experience during this study is best described with the following quotation:

> The in-depth center of the human relationship is a personal-relational sphere of spiritual depth. This center is the dynamic, existential ground of qualities and potentialities that are uniquely integral to humanness in its personal depth and interpersonal connectedness: reflective self-awareness, intrinsic freedom, intentional purposefulness, inherent relationality, ethical responsibility, and transcendent meaningfulness. This in-depth humanness of personal creativity and relational connectedness is extended and expressed in the complex interpersonal field of interactional behaviours and skills. Spirituality entails not only an awareness of human potential and creativity in personal depth, but also a sense of fundamental human relatedness within a larger sphere of universal connectedness and transcendental meaning. Spirituality is a hopeful and participatory opening to all reality, bright and dark, and to an open-ended course of life development, in which the evolution of the individual person – the 'I' – is inextricably grounded in relation reality (Kelly, 1995:88).

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